TOPS

"Tops" may mean one thing to the school boy with shining morning face, another to the writer of popular hotcha ditties . . . but to the manufacturer of quality products it means the "best metal cap money can buy" ▸ ▸ ▸ No manufacturer, large or small, restrained or aggressive, can afford to risk his reputation by creating the impression of cheapness in package . . . for cheapness in package, in turn, creates the impression of inferiority in product ▸ ▸ ▸ Phoenix Metal Caps may be depended upon to create the *right* impression . . . they are "tops" in the packaging of foods, drugs, cosmetics, chemicals and liquors.

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The DRUG and COSMETIC INDUSTRY

JULY 1936

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FRONT COVER

Who will buy my violets—a flower to match your ladies' eyes! A song the venders sing on England's Brighton Beach. But the lovely flowers grown in Southern France are put to another use. Turned into delightful perfume, they find a ready market among women the world over.

Photo courtesy Fritzsche Brothers, Inc.

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One Jurisdiction

WHILE the Food, Drugs and Cosmetic Act failed of passage at the recent session of Congress, there was sufficient sentiment in favor of the bill to be fairly certain that it will be enacted during the next Congress. Unfortunately, the House held the Bill so long in committee that there was not sufficient time properly to work out the differences between the Senate and House bills. It seems that during the next Congress the working out of a satisfactory comprise should not present any great difficulties.

HOWEVER, the stalmate created by the Senate insistence that the Food and Drug Administration should have control over advertising claims, and the House insistence that the Federal Trade Commission should possess this jurisdiction must be broken in some other way than that by which Senator Copeland tried to break it during the closing day of Congress. One or the other branch of the Government should have this jurisdiction and not two Government departments.

WE WONDER just what was in Senator Copeland's brain when he thought that anyone could draw a line of demarcation between advertising claims which concern health and advertising claims which concern the family budget or economics. Certainly the Food and Drug Administration would consider false therapeutic claims as a health matter, while the Federal Trade Commission and the persons who were defrauded out of the purchase price might properly consider these false claims a matter of economics.

THERE would be such overlapping in deciding whether specific statements were one or the other that the two departments would be in a constant state of agitation, to say nothing of those advertisements which might contain claims properly coming under the jurisdiction of both departments. Under any such method of control as Senator Copeland proposed, a manufacturer would not only be bothered by two departments on different claims, but he would also be bothered by both departments on the same claims. The manufacturer would not know who to obey with each department trying to build up a reputation so that it could eventually demand that all jurisdiction of advertising be placed in its hands.

NEW and NON-OFFICIAL

FEVERISHLY ARE MANUFACTURERS working with their attorneys to find out just what the Robinson-Patman Bill is going to mean to them. Many manufacturers in this industry have all sorts of pricing systems which include preferred accounts, retail agencies, and whatnot. These accounts have selected by experience with all manner of retail accounts over a period of years. Now manufacturers must forget all these preferred retailers and treat every retailer alike or else not sell a very large percentage of them.

The manufacturers who have adopted the del credere or factor method of distribution find that they must treat every retailer alike since all retailers are direct customers of the manufacturers who work under this system. Other manufacturers can refuse to sell retailers whom they do not wish to sell by sending them to wholesalers for the goods, but whether a retailer gets the goods from a wholesaler or from the manufacturer, he is buying direct from the manufacturer if the manufacturer is working under the del credere system. This means that the advantages of the del credere system are quite considerably offset by the disadvantages resulting from the passage of the Robinson-Patman Bill. As one person in the industry expresses: "Well those fellows can't have their cake and eat it." Just the same we can forsee a considerable dampening of the enthusiasm which has existed among manufacturers to further placate retailers by going del credere.

WHILE THE OFFICIALS OF THE U.S.P. have under way many plans to strengthen the interim revision policy of the Pharmacopoeia, manufacturers are wondering just what they are to do in the meantime. Some manufacturers feel that the statements that have been issued by the Revision Committee would not hold water in a court of law. They state that what the Revision Committee needs more than anything else is one or two intelligent legal advisers to set them straight. Of course the Food and Drug Administration would probably be reasonable in such instances, but manufacturers do not want to have to rely on reasonableness of any department or court anymore than is necessary. They want things down in black and white so far as it is possible to do so.

SOME OF THE COMMENTS regarding the Food, Drugs and Cosmetic Act during the discussion of the bill on the floor of the House are interesting. Particularly interesting was the statement by Congressman Rayburn:

"There might be a little lobbying around here by some people, but there is nobody who has lobbied around this Capitol on any bill in the twenty-three years I have been in Congress more than the members of the Federal Trade Commission have lobbied on this bill, and I love the Federal Trade Commission."

Also of particular interest are the remarks made by Congressman Kenny:

"We ought to pass a bill, but do we want this drug administration to be prosecutor, judge, jury and executioner? I am one of those who honestly believe that the people of this country want control of advertising in the Federal Trade Commission, and if you want it there, vote down this amendment, but decide to stay here until we get a good bill, because the country is anxiously waiting for it."

WE WONDER WHERE the cosmetic people were when the Congress was including in the recently enacted bill tax elimination and reduction of nuisance taxes. For when the bill was finally enacted many people first woke up to the fact that the tax upon jewelry was entirely eliminated, and the tax on furs was reduced to three per cent. We can consider that furs are quite necessary during winter months to our scantily clothed women in the northern part of the country, but since when has jewelry become a necessity that it should be given preferential treatment over both furs and cosmetics? And since when have furs become as essential as cosmetics which are used throughout the

"So I sez to the guy, 'How about the Patman Bill?' "

entire country all year around? Seems to us that the methods used by the jewelry people to eliminate the tax were just about perfect; the ones used by the fur people were good, but not quite good enough; and the ones used by the cosmetic people just a waste of time. Why not find out how the jewelry people did it?

WHETHER OR NOT the next election brings us another term of Roosevelt or brings us Landon, business men of the country can make up their minds that they are not going to be able to work away from present conditions for a long time to come. Taxes are going to remain high although they should work lower as we work away from the darkest days of the depression. Unemployment relief will not disappear by a wave of the hand or by the election of a Republican president, although there might be better ways of handling this undesirable situation. Likewise many of the changes that have taken place in other ways during the years since 1929 will remain with us in one form or another for a long period of years—some of them remaining forever. The changes that have taken place in this country are not restricted to this country. The movement has been world wide. Let us hope that we can handle it better than the countries of Europe have done, and let us hope that we can minimize the headaches that such fundamental changes bring.

WE ARE PLEASED to see a different line of reasoning coming into discussions on cosmetic taxation. On June 25, Dr. A. A. M. Dewing, Chairman of the legislative committee of the Maryland Pharmaceutical Association, told members of that association that cosmetics "are as essential as clothes" to women and "almost as vital as food."

In attacking the Maryland ten per cent. tax on cosmetics to raise relief funds, Dr. Dewing said:

"Lawmakers must be made to visualize that cosmetics are as essential as clothes to the American housewife and the working girl in their struggles for social and economic security today.

"Cosmetics are necessary because our high standards of living make cleanly and well groomed appearance imperative to women's self-preservation in this highly competitive world."

And the best part of this information was that it was given prominent first page display in the New York *Herald Tribune*. We are proud to have sounded this keynote in our editorial in the May issue of this journal. We hope that more people in the industry will follow this lead to a proper method to fight taxation on cosmetics. Sooner or later the facts regarding cosmetics and their common everyday use must be firmly impressed upon the brains of the legislators throughout the country.

Our Family Album

Advertisements of the nineteenth century are well typified by this card used to promote the sale of Carter's Iron Pills in those bygone days.

LARGE SCALE RETAILERS will undoubtedly appear shortly with all sorts of schemes by which to evade the purposes of the Robinson-Patman Bill, and manufacturers will be hard pressed to recognize these schemes and continue the additional discounts. In many instances the matter will resolve itself into arguments between manufacturers and large retailers as to whose lawyer is right. Cautious manufacturers will rely upon the advice from their own attorneys and will turn down the retailers' demands. There will be some, however, who will be willing to take a chance. Certainly, if the retailers honestly believe that their attorneys are right, these retailers should be willing to post a bond to guarantee to the manufacturers that the retailer will take care of legal fees and any resulting fine if action is started against them. This demand seems reasonable enough, if the retailer is to insist that he receive benefits which the manufacturer believe illegal.

In many instances "inside" discounts will doubtless continue for the reason that no one knows who gets them, and certainly the buyer is not going to tell under present conditions when he is now equally liable under the law. The provision that the buyer is equally responsible with the seller sound very smart at first blush since it is generally believed that it will stop the buyer from making illegal demands. This will be true in many instances, but in many other cases the buyer will use this provision as an argument that the seller has nothing to fear in breaking the law since the buyer's lips are automatically sealed and he certainly will not breathe a word to anyone.

This provision will tend to make the law more unenforceable than it would otherwise be. Who is going to tip off the Federal Trade Commission? Secret discounts will be more secret than ever.

DRUG AND COSMETIC MANUFACTURERS should not lose sight of the fact that the anti-basing point provision which was taken out of the Robinson-Patman Bill will be introduced as a separate bill at the next session of Congress. There are some legislators in Congress who are anxious to see this provision enacted into law. As this provision was written into the Robinson-Patman Bill, and as it might be introduced into Congress, it would mean that every package of a drug or a cosmetic would have to be sold F.O.B. the manufacturer's plant. It is hard to see how any bill could be written to eliminate the anti-basing point practice without it completely eliminating all delivered prices.

Aside from the fact that this bill would raise raw material prices for some drug and cosmetic manufacturers and lower them for others, it would mean that the advertised products of these manufacturers would have to be sold at varying prices all over the country depending upon the distance from the plant of the manufacturer. The idea of shipping goods to manufacturer-owned warehouse or to subsidiary companies in various states have been thought, but the additional cost might make this method undesirable if, in fact, it will be legal, which is a moot question.

Any such law would not only upset raw material manufacturers to an extent that might easily prove disastrous to many of them, but it would very considerably upset the manufacturers of finished products who advertise uniform prices throughout the country. A scheme to sell a subsidiary company in a distant state and then have this company sell at any price that it desires might not fit in with the provisions of the Robinson-Patman Bill as it now stands, or might be considered an attempt to evade the anti-basing point bill as it is finally enacted. Because of the terrific effects which such a law would have upon business as it is now conducted in this country, many manufacturers are of the opinion that such a law simply can not be passed. But stranger things have happened. People in this industry had better start thinking and acting if they do not want such a law slipped over during the next session of Congress.

EWING GALLOWAY

THE ROBINSON-

With the passage of the so-called "Anti-Chain Store" Bill, manufacturers are interested in the requirements of the new law. Unfor-

The Robinson-Patman Bill is now law and was effective immediately when it was signed by President Roosevelt about the middle of last month. Thus the bill which has long been labelled as the "Anti-chain Store Bill" is now to be enforced by the Federal Trade Commission and it will affect all manufacturers and all importers of all products to a greater or lesser degree. First instigated by the wholesale grocers of the country in an effort to take away from the large grocery chains some of their advantages in purchasing power, this bill has also been fostered by wholesale druggists of the country. But because such a bill can not be written only to apply to one or two branches of trade, but must of necessity apply to all trade, the bill applies to every type of manufacturer and distributor.

The bill is an amendment to Section 2 of the Clayton Act, which section already prohibits price discrimination to some extent. But it strengthens this prohibition against price discrimination to a marked degree. It allows manufacturers to differentiate in prices only on a basis of quantity discounts. And these quantity differentials must be equal to the saving in cost of manufacture, sale, and delivery. Furthermore the quantities on which additional discounts can be granted are subject to upper limits which the Federal Trade Commission is empowered to determine. The basis for setting upper limits on quantities on which additional discounts can be granted is that prohibited large quantities might be available to only a few very large buyers, and therefore, these discounts would grant these few large buyers an unfair advantage over their competitors.

When it is realized that this bill not only applies to every manufacturer of foods, drugs and cosmetics, but also with equal force to manufacturers of clothing, radios, automobiles, and everything that one can think of, as well as to manufacturers and importers of raw materials to all industries, the task set before the Federal Trade Commission in the establishment of quantity limits can be partially visualized. In seeking to enforce this one provision of the bill, the Federal Trade Commission must make a study of the market for every trade marked product in every branch of trade and must determine not only the limits that must be placed upon quantities upon which additional discounts can be granted, but must also determine just how much is saved in cost of manufacture, selling, and delivering the various quantities for which different discounts are granted. A similar study must be made of the markets for all products which are made by a number of different manufacturers, and of the markets for all raw materials entering into the manufacture and packaging of all finished products.

The result will be that the Federal Trade Commission will probably insist upon published prices for most com-

EWING GALLOWAY

PATMAN BILL

tunately no one can properly advise on exactly what the law means, although some things are quite plain.

modities and trade-marked articles, after the manner of the NRA. Price reductions are permitted, but when they are made they must be available to all buyers.

While the enforcement of this legislation will doubtless cause many sellers of raw materials to make changes in their selling prices, it is the effect upon the sellers of finished products in this industry which is most involved and therefore of most interest.

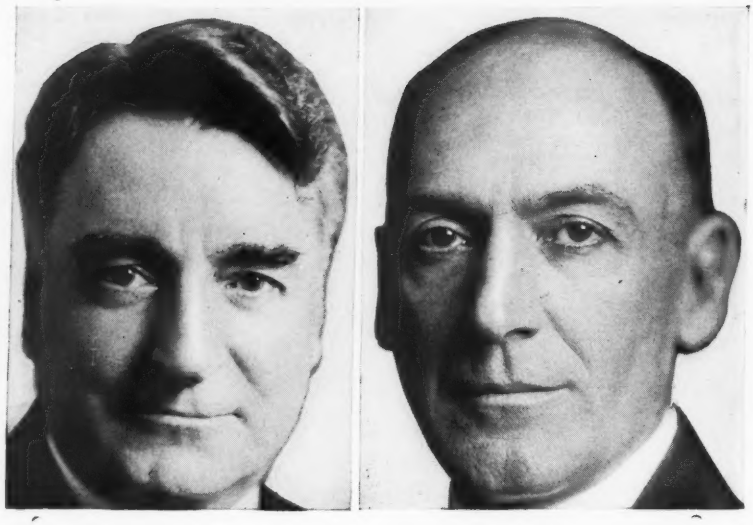
The one price to all for like quantities means that manufacturers of drugs and cosmetics must give up their preferred accounts unless these preferred accounts perform special services for the manufacturers in the way of window or counter displays, advertising, or any of the number of services which the retailer can perform for the manufacturer. And if the manufacturer sells accounts, other than his preferred accounts direct, he must allow these other accounts to come in on the same basis as his preferred accounts. For payments and allowances for services performed by the retailer must be available to all retailers on a proportionate basis. The only way in which a manufacturer could get around the extension of these service payments to all retailers on a proportionate basis, is to sell only his preferred accounts direct, and force all other accounts to buy through the wholesalers. In this way the manufacturer would not be discriminating between his retail accounts. He still has the right to choose his customers, and he could choose only those retail customers whom he is desirous of paying for services. His wholesale prices are on an entirely different basis, and the services for which the wholesaler would be paid are on an entirely different basis.

However, the manufacturers who have gone on the del credere or factor system of distribution find themselves up against a somewhat different picture for the reason that, by ownership of the goods in the factors' hands they are selling all accounts direct and therefore must extend to every retailer the same allowances for services. This phase of the Robinson-Patman Bill is apt to make the del credere method of distribution somewhat less popular, and is apt to slow down the tendency of manufacturers to swing to this method. The same disadvantage will be felt by those manufacturers who have been handling all of their accounts direct.

The main difficulty with the Robinson-Patman Bill is that even the foremost attorneys who have been closely following the measure through its various stages, frankly admit that they can not intelligently advise on the bill. They frankly state that nobody knows just what the bill means. As an evidence of this there is even some dispute as to whether or not the bill allows additional discounts to wholesalers, although everyone

(*Continued on page 77*)

Because the House would not meet the demands of Senator Copeland to give at least part of the advertising control to Enforcement Chief Campbell, the Food, Drugs and Cosmetic Act failed of passage. Now the industry must wait until January until anything can possibly be done.



DRUG BILL FAILURE

Attempts to compromise the Food, Drugs and Cosmetic Act failed when the House conferees and the House itself refused to accept anything less than complete control of advertising under the bill by the Federal Trade Commission. That such a condition arose at the last moment is greatly regreted by leaders in this industry. The affected industries as well as Senator Copeland were willing to accept most of the changes which the House made in the bill, although some of the more objectionable changes were removed in conference.

The bill was compromised in conference successfully on all points other than advertising control. On this one point, Senator Copeland and his associates in the Senate made what the Senator stated went fifty per cent. of the way toward meeting the objections of the conferees, while Chairman Rayburn, of the House, stated that Senator Copeland had gone seventy-five per cent. of the way. The compromise on advertising upon which Senator Copeland tried to reach an agreement, was that the Department of Agriculture have control over all matters of false advertising that pertained to matters of health, while the Federal Trade Commission have control over false advertising that pertained to economic matters. Just what is the difference between these is not understood by a great many people in the industry who could see ahead continual conflict between the two agencies as who would be charged with enforcement in a particular instance with the manufacturer in a quandry as to whose ruling he should obey.

Suppose for a moment that a manufacturer should advertise a medicinal product for treatments of certain ailments—this might be thought at first blush to be a matter of health over which the Department of Agriculture would have jurisdiction. But then consider the person who read this advertisement and then went and paid a dollar for a package only to find that it was ineffective for any one of the ailments for which it was advertised. The purchaser would doubtless feel that he had been defrauded of a dollar and the problem, so far as the customer was concerned, would be one of economics in that it would affect his family budget.

Senator Copeland expressed the thought before the Senate that the compromise left "all matters relating to health to the administration of the Food and Drug Administration and all matters having to do with economic problems, and with the family budget and practically all matters relating to food and cosmetics to be administrated by the Federal Trade Commission." We can also see how some matters which one might consider purely economic problems as applied to foods and cosmetics might very well be regarded as health problems. Suppose that a salad dressing was advertised as containing only olive oil when in fact it contained mineral oil. While this might be considered an economic problem since the purchaser was not getting less value than he was supposed to get, it might very well be considered a health problem. We can very well see why the

(Continued on page 48)

THE EFFECT OF SPECIAL OFFERS

TOILET REQUISITES, our associated publication, has been conducting an investigation among the drug and cosmetic buyers in leading department stores throughout the country. The purpose of the survey has been to make a study of the trends in merchandising today. But one of its by-products has been a very definite reaction against combination packages and offers which is of direct interest to every manufacturer. They have all pointed out the overwhelming number of these special offers by reputable houses and practically all of them have questioned the wisdom of them.

We know the manufacturer's point of view concerning offers of this kind. When the market is lagging, he sponsors combinations of this sort in an effort to stimulate and interest the consumer and hold up his sales volume. This is but one of the policies into which the cosmetic business, along with many others, is driven in an effort to meet a temporary condition, but, in the face of these decided retailer reactions, manufacturers might do well to question seriously the long-range wisdom of such policies.

The following expression of sentiment on this subject is typical of the reactions of the buyers who have cooperated in TOILET REQUISITES investigation of merchandising trends.

"We have never seen so many special offers to the customer as exist in the cosmetic market today, especially among the well-known treatment lines.

"We believe the condition has become a serious one and if it is not discontinued, the ultimate results are going to be a wholesale scaling down of prices.

"The customer is eventually going to acquire a state of mind in which she will feel that this merchandise in general is not worth the prices charged and that manufacturers find it necessary to give away merchandise to induce the customers to buy.

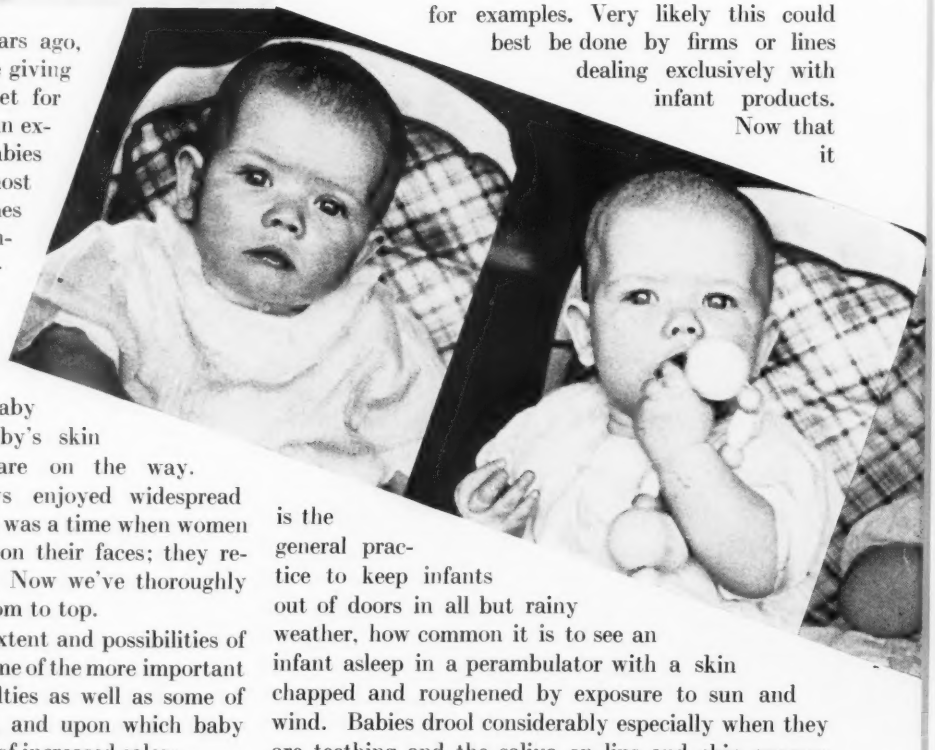
"Our business is excellent and we have no grounds for complaint. However, we are trying not to let this obscure our vision and we can see dire consequences within the next two or three years unless this policy is discontinued."

Such is the typical reaction of buyers in the better department stores throughout the country. In view of the unanimity of sentiment on this question, it should be of interest to all manufacturers in planning promotions and sales policies generally.

TOILET GOODS DEPARTMENT, BONWIT TELLER'S, NEW YORK

The market for baby specialties is one that is not always fully appreciated. Proper development of this market will greatly increase the returns from it.

We wish to express our appreciation to Albert A. Teeter for allowing us to use the pictures which he took of his baby.



As we predicted a few years ago, both branches of the trade are giving more attention to the market for baby products. This really is an extensive market because babies have a habit of happening almost all the time and sometimes most unexpectedly. In a general sense of course many cosmetic and pharmaceutical specialties have been used for babies, but no one manufacturer has made an effort to sell a complete baby line. Antiseptic oils for baby's skin have appeared and more are on the way. Baby powders have always enjoyed widespread use. As a matter of fact there was a time when women wouldn't use talcum powder on their faces; they reserved it for baby's bottom. Now we've thoroughly covered the market from bottom to top.

In order to appreciate the extent and possibilities of the market let us summarize some of the more important products used as baby specialties as well as some of those used by adults as well, and upon which baby emphasis might be productive of increased sales:

Specialties: Teething lotions, Antiseptic baby oil, Baby powder, Infant's suppositories, Diaper rinse, Baby foods. *General Preparations:* Cough syrups, Liquid shampoo soap, Milk of magnesia, Laxatives, Sun tan oil, Soothing lotions, Cod liver oil.

Although these products are somewhat various they are not sufficiently numerous to preclude the possibility of a specialized baby line or even of a baby comfort kit that would contain the whole assortment.

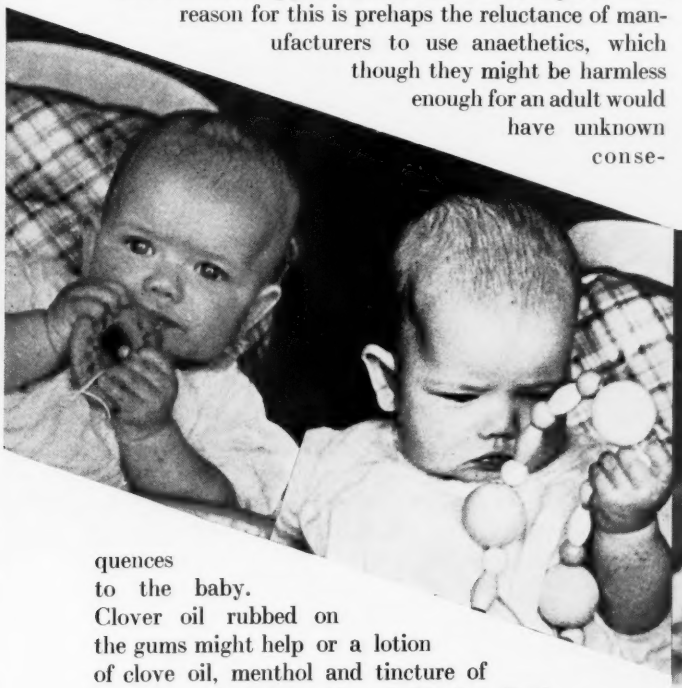
It has always seemed very strange to us that the infant angle is not stressed more in the advertising of such general products as sun tan oil and milk of magnesia for examples. Very likely this could best be done by firms or lines dealing exclusively with infant products. Now that it is the general practice to keep infants out of doors in all but rainy weather, how common it is to see an infant asleep in a perambulator with a skin chapped and roughened by exposure to sun and wind. Babies drool considerably especially when they are teething and the saliva on lips and chin exposes them to the danger of fissured lips and chapped chins. A protective oil such as a sun tan oil or an antiseptic oil performs in such instances a protective function and baby gradually acquires the tan so much sought after without paying a penalty for it.

Babies are susceptible to constipation and to acidity especially during periods of dietary changes and in hot weather, hence, milk of magnesia is put into baby's bottle. Although the mixture is far from palatable the baby usually tolerates it until he gets big enough to haul the nipple out of his mouth and howl in protest. A specially flavored Baby Milk of Magnesia might find a

BABY SPECIALTIES

ready market. Although many mothers still use pure castile soap in cake form for baby's bath and shampoo, neutral liquid shampoos and liquid soaps for washing baby clothing have been on the market for some time. Laxatives in syrup form have been used for many years, but modern mothers seem to lean toward simple products like milk of magnesia.

Teething lotions are not very common which is surprising in view of the fact that babies and mothers alike have a harrowing period while teeth are being cut. One reason for this is prehaps the reluctance of manufacturers to use anaethetics, which though they might be harmless enough for an adult would have unknown consequences to the baby. Clover oil rubbed on the gums might help or a lotion of clove oil, menthol and tincture of benzoin in alcohol would probably be effective and undoubtedly harmless. A bit of this rubbed on baby's sore gums with a cloth would have a temporary effect. But try it on your own gums first. Teething syrups, drops and powders have been pretty generally sold abroad for a number of years, but we must confess that the European formulas we have inspected have little to commend them.



Antiseptic baby oil may be made as follows:

White mineral oil (65-75)	45. %
Refined peanut oil	54.7 "
Oxyquinoline benzoate	.2 "
Maleic anhydride	.1 "

Procedure: The maleic anhydride and the oxyquinoline benzoate are dissolved in the peanut oil and the mineral oil is added. Then preparation is then filtered. While there is still some discussion as to the effectiveness of the test for oil soluble antiseptics, those who have worked with oxyquinoline benzoate have testified to its effectiveness. The maleic anhydride is an antioxidant designed to prevent rancidity. The mineral oil can be

(*Continued on page 48*)

LIPID BALANCE

By Mary Imogene Shepherd

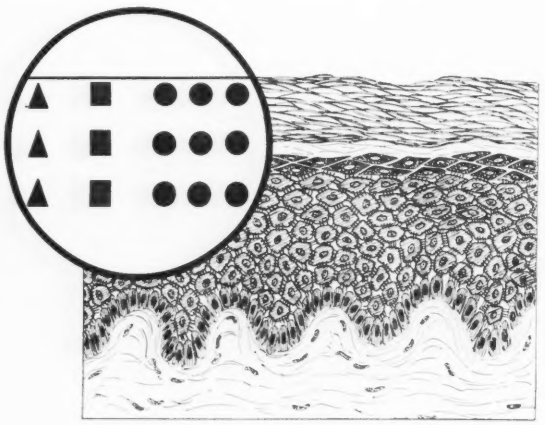
MARY IMOGENE SHEPHERD

Stated briefly, the principle of lipid balance in cosmetic creams is merely that of insuring that the fats present shall represent, as nearly as possible, the kind and the proportion that act most gratefully upon the skin as a means of preserving its natural qualities. A natural skin is the most beautiful skin, so that the achievement of naturalness is synonymous with the development of beauty.

Collectively, the fats are best referred to as lipids; and the principle lipids of the skin, as has elsewhere been shown (1, 2) include lecithin, cholesterol and unsaturated fatty acids containing specifically linoleic acid in that isomeric form now more commonly known as vitamin F.

It is curious that the average proportion of lecithin to total cholesterol in skin is as 1 to 1; and just that proportion, colloidal chemists insist, is approximately the ratio that makes for balance of antagonism. Lecithin and cholesterol promote opposite types of emulsion. If certain oils are emulsified with water and lecithin is used as the emulsifying agent, the emulsion tends to the oil-in-water type; whereas cholesterol furnishes an emulsion which tends to the water-in-oil type. The two types are opposite and have different properties. But when the lecithin and cholesterol are equally present in the same emulsion, the tendency is to keep the two phases of the emulsion (the oil and the water) in balance so that the emulsion type can change quickly to one or the other form.

Most physiologists look upon this balance created by lecithin and cholesterol as the explanation which solves the problem of cell permeability. A comprehensive review of these studies is available in the work of Degwitz (3) and should be studied critically by cosmetic chemists who desire to enhance the colloidal chemical effectiveness of the preparations which they produce.



▲ = Cholesterol

■ = Lecithin

● = Unsaturated fatty acids containing vitamin F

Diagrammatic representation of normal skin with a magnified normal fat droplet showing presence of cholesterol (triangles), lecithin (squares) and unsaturated fatty acids carrying vitamin F (circles) in the normal ratio of 1:1:3.

For each part of lecithin, or of cholesterol, present in the normal skin there are approximately three parts of unsaturated fatty acids. One of the constituents of the unsaturated fatty acids is an isomeric form of linoleic acid.

It has always been known that fats are absorbed and used by the layers of the skin when applied externally. All authoritative pharmacologic texts refer to this knowledge, Sollmann (4) writing as follows: "Oils penetrate the epidermis much more readily than watery solutions. Rubbed into the skin, they enter the sebaceous glands and eventually can be demonstrated microscopically in the lymph channels. True fats are gradually oxidized and disappear."

The key to the absorption and utilization of fat by the skin is contained in Sollman's statement that *true* fats are gradually oxidized and disappear,—that is, are consumed or metabolized. The requisite, obviously, is that the emollient base be comprised of a *true* fat; and further, that the true fat be acceptable to the layers of the skin. Some fats are absorbed more promptly and are utilized better than others.

IN CREAMS

and Dorothy C. McMath

DOROTHY C. McMATH

The biochemistry of the skin reveals that the lipid fraction is exceptionally rich in true fats and particularly of those fats that are readily metabolized, namely, the unsaturated fats. The greater the degree of unsaturation of the fat, the more readily should it undergo oxidation. Stearic acid should resist oxidation compared with oleic acid, the first being a completely saturated and the last a partly saturated (one double bond) fat. Fats made up of fatty acid radicals that are more highly unsaturated are correspondingly more readily utilized.

Biochemically, then, the fat-pattern that most resembles the sebum shows 1 part of lecithin, 1 part of cholesterol and 3 parts of an unsaturated oil. The ancients used sesame oil and olive oil as a base for their emollient preparations. Physicians used lard. Such oils are splendid from the viewpoint of biochemical requirement, but they must be fresh or well-preserved. If they rancidify, the products of rancidity may be irritating. With our contemporary information on the antioxidation preservatives useful to check rancidity, however, the return of these and similar oils to cosmetic formulation looms up as another future advancement that should greatly improve creams.

So long as proper *proportions* are maintained, the utilizable lipid portion of the cream will be proper; and, obviously, the cream will be more effective in direct proportion to the amount of this lipid mixture which it contains. If it contains 1% of the total lipid balanced mixture and 99% of an inert oil, it can not be as effective as when the ratios are reversed.

Diseases of the skin can occur when any of these four components are altered in the natural skin. Physicians recognize diseases of the skin in which the cholesterol content is abnormal; or in which the lecithin content is abnormal. Nothing much is known about the disturbance due to improper unsaturated fat content; but lack of vitamin F will produce the Burr syndrome which has been described so many times.

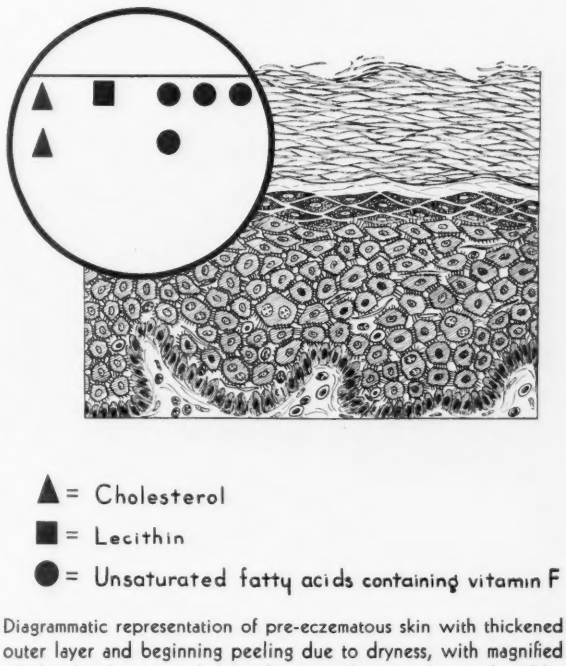
It makes little difference whether the lipid balance is disturbed either by derangements of internal origin which fail to deposit the proper lipids in the layers, or whether some of the lipids are removed from without. If the balance is disturbed, blemishing changes will develop. How the balance is disturbed, whether through internal or external factors, is secondary.

Two types of cream are widely used, one generally preceding the use of the other. The first type is the cleansing cream. This is followed by the nourishing cream.

The cleansing cream is designed primarily to cleanse. The cleansing is accomplished partly by mechanical action and partly by chemical solution of oil soluble materials. But the solution of oil soluble materials includes the removal of fats according to their solubility in the oil base of the cleansing cream.

The ideal cleansing cream would be one that either does not remove the desirable fats, or, if it removes

(*Continued on page 48*)



Diagrammatic representation of pre-eczematous skin with thickened outer layer and beginning peeling due to dryness, with magnified oil droplet showing imbalanced ratio such as can be produced by faulty nutrition or by selective action of solvent oils contained in imbalanced cleansing and nourishing creams.

EWING GALLOWAY

FOR THE

Item	*Purpose*	*Properties*
Permanent Wave Solution	To permit hair to be curled with proper heat treatment.	Solution, usually with ammoniacal odor, often tinted.
Wave Set	Gum solution to "set" waves between permanent treatments.	Translucent or opaque gum solution with desired properties as an adhesive. Color and perfume usually present.
Brilliantine	An oily treatment to make the hair lustrous and keep it in place.	Tinted and perfumed mixture of oils and waxes, liquid or solid.
Shampoo	To cleanse the hair thoroughly without leaving it harsh.	Clear solution, either lathering or non-lathering type.
Rinse	To "liven" the hair, restoring luster after washing.	An acid solution to dissolve lime soaps produced by the shampoo and hard water.

HAIR

EWING GALLOWAY

Composition	*Formulas*			
Consists of a weak alkaline solution with pH 10, to stretch hair for curling and waving. Volatile alkaline mixtures said to cause least damage to hair. Ammonia, borax, potassium carbonate most often used. Newer compounds include sodium and ammonium sulfites, sodium thiosulfate, etc.	*Ammonia 25%*	5.0	10.0	8.0
	Borax	...	5.0	2.0
	Potassium Carbonate	0.7	...	1.0
	Disodium phosphate	...	1.0	0.5
	Ammonium chloride	0.3	...	...
	Water	94.0	84.0	88.5
Tragacanth, karaya, Irish moss, quince seed, etc. are most popular. Alcohol is included *to accelerate drying, glycerine inhibits flaking* on the hair, alkalies make a more or less *stringy mixture. Preservatives are absolutely* essential.	*Karaya*	2.0	...	1.0
	Tragacanth	...	1.0	0.5
	Alcohol	5.0	10.0	10.0
	Glycerine	2.0	2.0	1.5
	Borax	...	3.0	2.0
	Water Preservative	91.0	84.0	85.0
Mineral oil of medium viscosity usually used *to give high luster. Vegetable oil necessary* for dry hair and scalp. Addition of waxes *to make solid mixture. Preserve when* necessary.	Mineral oil	90.0	...	50.0
	Olive oil	10.0	80.0	...
	Spermaceti	...	20.0	...
	Petrolatum	...	...	50.0

Soap shampoos contain 20 to 30% of soluble soap which lathers quickly and abundantly on the hair. Non-lathering shampoos are sulfonated vegetable oil mixtures, while soapless, lathering shampoos contain new non-alkaline wetting agents of high detergent power.

Lathering		*Non-Lathering*		*Soapless*	
Coconut oil	8.0	Sulfonated castor oil	62.0	Wetting agent	8.0
Olive oil	12.0	Sulfonated olive oil	31.0	Glycerine	5.0
KOH	4.4	Mineral oil	5.0	Sugar	5.0
Alcohol	3.0	Ethylene glycol	2.0	Tartaric acid	0.5
Water	72.6			Water	81.5

Citric and tartaric acids are used in lemon rinses (lemon odor). Acetic acid is effective and cheap.

A 4% solution of the acid in water with the addition of a little alcohol or glycerine to keep the perfume in solution is usually effective.

Lipid Balance

(*Continued from page 45*)

them, will do so without altering their proportion in the skin. This, seemingly, can be accomplished by the principle of biologic saturation. Biologic saturation simply implies the addition of that amount of cholesterol, lecithin and fatty acids to the mineral oil such that either the skin fats are not removed at all or, if they are removed, are removed in the proportion of 1:1:3; and this is done by merely adding cholesterol, lecithin and unsaturates in the proportion of 1:1:3 to the cleansing cream.

It is not intended that the cleansing cream shall add any essential lipid to the skin; it is imperative only that it shall not remove any, or, if any is removed, that it be done in proportions such that the remaining lipids are still in the 1:1:3 ratio.

The diagrams illustrate what is meant. The first diagram is intended to show a section of the skin. A drop of skin-lipid is magnified, diagramatically. It shows cholesterol, lecithin and total fatty acids in the proportion of 1:1:3. Such a skin remains normal.

The second diagram shows a disturbed ratio, such as may follow the use of an imbalanced cleansing cream. The disturbed ratio makes for a thickening of the outer layer which then peels. It is recognized in practical work as a drying effect. This explains, seemingly, the general finding that cleansing creams may dry the skin. But if the cleansing cream were properly constituted, such impairment would not result.

It is incorrect to expect a nourishing cream to be effective if it is applied to a defectively fat-patterned skin. Hence the necessity for insuring the proper type of cleansing cream so as to leave the skin receptive for the proper type of nourishing cream. This should be self obvious. And the correct balancing of the cleansing and the nourishing cream is the entire sum of the proper lipid balance in cosmetic creams.

The nourishing cream remains in contact with the skin for a much longer time than does the cleansing cream; thus, the cleansing cream requires considerably more fat-balancing ingredients than a nourishing cream. We find that double the amount used in the nourishing cream is a good practical rule to follow. Thus, a cleansing cream should contain 240 vitamin F units per gram, a nourishing cream need only contain 120. So it is with the lecithin, cholesterol and total unsaturated fat.

The maintenance of the proper lipid balance in these two creams furnishes truly remarkable results. Reduced to everyday concept, it may be said that balancing the nourishment of the skin is as important as balancing the nourishment for the body.

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2. Shepherd, Mary Imogene; Drug and Cosmetic Industry, Vol. 38, No. 5, pp 629, May 1936.
3. Degwitz, Rudolph; Lipoide und Ionen, Dresden, 1933.
4. Sollmann, Torald: A Manual of Pharmacology, W. B. Saunders Company, 1924.

Drug Bill Failure

(*Continued from page 40*)

Federal Trade Commission might be of the opinion that Senator Copeland had gone seventy-five per cent of the way toward giving the Federal Trade Commission control of advertising, but we can also see how the Food and Drug Administration might believe that it was to get fifty or seventy-five per cent. of the control—it all depends upon the point of view with which you look at these violations.

The one satisfactory change made in the compromise bill so far as drug manufacturers are concerned was that the variation clause was broadened from the wording used in the House bill and restored to the way in which it was worded when the bill passed the Senate. Also the setting up of multiple standards for foods was eliminated with authority given to the Food and Drug Administration to set up one standard for each food. This was another change back to the wording of the bill as it passed the Senate.

On the other hand, the multiple seizure clause of the act remained as it was in the House measure. This is the more drastic form under which multiple seizures are permitted in cases of products misbranded not only imminently in a way to make them dangerous to health, but also in a way as to make them grossly misleading or fradulent.

The compromise bill was passed by the Senate, but when it became before the House it met with opposition. Since it did not come before the House until the evening of Saturday, June 20 when the Congress was to adjourn, there was no time to try to get the Senate to agree to the demands of the House that all advertising control under the bill come under the jurisdiction of the Federal Trade Commission.

Baby Specialties

(*Continued from page 43*)

replaced and the preparation made wholly vegetable. Peanut, sesame, corn, olive and other bland oils can be used in these preparations.

Vitamin concentrates haven't been used in these preparations as yet but they will be soon—just as quickly as a perfume is developed that will mask the odor of the concentrate. One doesn't want baby to smell like a fish; some of them smell bad enough as it is. But the idea of applying vitamin concentrates externally is by no means to be passed over lightly as there are many babies who cannot tolerate cod liver oil administered in the usual way.

Antiseptic baby powder is best made with boric acid. This is soothing and what is equally important deodorizing. A proper powder may be made thus:

Boric acid	60.0%
Talc	29. "
Zinc stearate	10. "
Trisodium phosphate	1. "

(*Continued on page 64*)

RECENT PROGRESS IN MEDICATION

By John C. Krantz, Jr.*

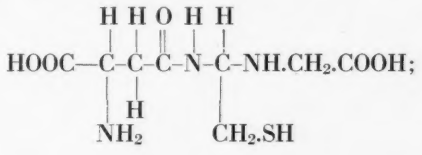
"Medicines, they sometimes cure, they frequently relieve, they always console."

The one permanent feature of the field of medication is constant change. From myths and magic, from folk lore and empiricism and from quackery and charlatanism, modern therapeutics has risen to a place of scientific importance in the general medical program. This change has occurred in a kaleidoscopic manner since the turn of the century. The complicated, crude, vegetable extractive preparation is rapidly becoming extinct. The synthetic organic chemical, the pure endocrine principle and the bacterial serum have reached the crest of the wave of popularity in the physician's armamentarium. There is no reason to lament the existence of this situation.

As early as 1920 it was said that one dare not write a treatise on the general field of atomic physics, because before the proof on the article was read it would be out of date, owing to the continuous rapid strides that were being made. One feels that the same condition obtains today in the field of medication and therefore, the contents of this short discussion will be confined to a limited number of phases of drug research and effort will be made to review only the latest advances so that by the time that this reaches the eye of the reader, it will not have been supplanted in its entirety by newer knowledge.

The Skin and Mucous Membranes

In recent years various investigators have shown the relationship between the presence of (SH) or sulfhydryl-containing compounds and accelerated reproduction of tissue cells. This increase has been demonstrated in the chick embryo, in sprouting potato tubers and in tumor tissue. Skin contains relatively large quantities of a sulfhydryl-containing substance, namely, glutathione. This fact seems to be related to the great healing power possessed by normal skin. Glutathione is a tripeptide having the following constitution:



thus it contains glycine, glutamic acid and cysteine. The sulfhydryl group of cysteine furnishes the mechanism for tissue respiration and because of this action, cysteine, in the form of its hydrochloride, has been recently introduced as a curative agent in the treatment of wounds, cutaneous ulcers and similar lesions. The 0.5 per cent. solution buffered to pH 4 is applied directly to the wound as a dressing.

In 1931, Gelornuni produced alpha-monothioglycerol by treating glycerol chlorhydrin with potassium hydrosulfide under pressure in alcoholic solution.

At the Mayo Clinic this substance has replaced cysteine, having been employed in two hundred and sixty-four cases with results in tissue healing which were quite satisfactory. A dilution of 1.5000 in mucilage of tragacanth is employed. Alpha-monothioglycerol enjoys a greater stability than does cysteine and bids fair to become an important therapeutic agent. It is proper at this place to point out that SH containing compounds stimulate the growth of various kinds of cells and hence these substances are contraindicated for use on ulcers of malignant origin.

*Secretary National Conference on Pharmaceutical Research.

The Autonomic Nervous System

It is well established that epinephrine is the activator or hormone of the sympathetic division of the autonomic nervous system, and acetylcholine serves as the hormone of the parasympathetic division of the autonomic nervous system. The cholines are widely distributed through nature. Shortly after the beginning of the present century, Reid Hunt isolated the potent acetylcholine 100,000 times more potent than choline from the suprarenal glands.

In addition to stimulating the parasympathetic system and thus serving as an antagonist to the alkaloid, atropine, acetylcholine exhibits a nicotine effect, i. e., it depresses and paralyzes the autonomic ganglia. Owing to this later action and the transient nature of its response, acetylcholine has never enjoyed a wide use in therapeutics.

Quite recently Major and Cline in an effort to prepare a compound analogous to acetylcholine and yet devoid of the nicotine-like action possessed by that compound prepared beta-methylacetylcholine chloride. This compound had been prepared previously by Taveau in 1911. The substance was shown to possess three important advantages over the other cholines; first it is effective when administered orally; second, it is more slowly destroyed in the body; the third, the substance posesses practically no nicotine effect.

This product has had extensive clinical trial in the hands of Isaac Starr of the University of Pennsylvania and others. The drug finds application in the treatment of paroxysmal tachycardia, in which it owes its usefulness to vagal stimulation, thus depressing the rate of heart beat. In Raynaud's disease, embarrassment of the capillary circulation in the extremities, giving rise to "numb fingers," it has been found useful in stimulating capillary circulation. Starr has observed an increased skin temperature after the administration of the drug, indicating a more adequate peripheral circulation. In arthritis of the rheumatoid type beta-methylacetylcholine chloride has been found useful in increasing the blood supply to the affected joint and relieving pain. For this condition the drug is administered routinely by mouth and also by iontophoresis at the affected site.

The Coronary Arteries

Coronary disease remains still as one of the foremost causes of death. Sodium nitrite, amyl nitrite and glyceryl trinitrate remain as the drugs, which when acting upon the musculature, produce dilatation. The latter two are emergency drugs in the anginal attack. Among the xanthine bases which have enjoyed prominence for years in the routine treatment of angina pectoris, "Theophyllina Cum Aethylenediamina" of the U. S. P. XI, sold under the name of Aminophylline, has gained a great deal of popularity in recent years.

Recently trichlorethylene, which has been used since 1916 in the treatment of trigeminal neuralgia, has been used in the treatment of angina pectoris. The pharmacology of the drug was investigated by Krantz and his associates at the University of Maryland and William Love, Jr. has investigated the drug clinically in a number of patients suffering with this malady. Trichlorethylene when administered twice daily in 1 cc. doses by inhalation depresses the basal ganglia and produces a condition of diminished sensibility to pain. The patient as a rule has less frequent attacks and the distress, apprehension and fear of impending death are somewhat mitigated. Trichlorethylene apparently exerts no specific action on the coronary arteries and does not cause dilatation, but on the other hand perhaps owes its usefulness to the calm and sedation which accompanies its use.

Vitamin C

Vitamin C was isolated first by Szent-Gyorgyi in 1933. The substance is now available commercially in a purity which is practically 100 per cent. The constitution of ascorbic acid or vitamin C has been confirmed by its synthesis. It is of interest that this vitamin may be synthesized from the readily available d-glucose.

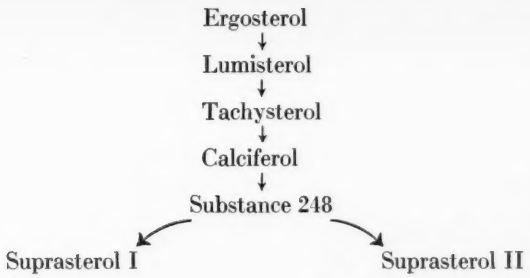
The production of vitamin C in large quantities has made it possible for biochemists further to investigate the physiological role of this substance in the animal body. Several isomers and analogues of ascorbic acid have been synthesized and their properties studied. These substances have been altogether devoid of the antiscorbutic activity of the l-ascorbic acid or have possessed this property to a much smaller degree. The primary oxidation product of l-ascorbic acid, however, is fully active as an antiscorbutic agent.

Vitamin D

The existence of vitamin D as an entity separated from and independent of vitamin A was shown first by McCollum et al. in 1922. In 1925, Hess and Weinstock irradiated pieces of human skin; this was fed to rats and found to have anti-rachitic properties. In 1927, Windaus showed that the substance capable of developing anti-rachitic properties was ergosterol, a sterol found in ergot. This substance which was activated by the irradiation of the skin was likely a sterol.

Through the chemical investigations of Windaus and Langer, the structure of vitamin D has been tentatively established as cholesterol, $C_{27}H_{45}.OH$ and ergosterol $C_{28}H_{43}.OH$.

When ergosterol is irradiated in various solvents, as was previously stated, it is converted into vitamin D. By ingenious methods of fractional distillation in a high vacuum, Askew et al. obtained potent crystals. The name "Calciferol" has been applied to that form of vitamin D which has been isolated. It is not impossible that at least one other form of the vitamin occurs in the crude irradiation-product. Bills, reviewing the work of Windaus and Stetz in their spectrum analysis of the products of irradiation of ergosterol presents the following scheme:



The vitamin conference of the Health Organization of the League of Nations has recommended Calciferol as a standard reference for vitamin D preparations. An olive oil solution of such strength that 1 mgm. contains 0.025 gamma of crystalline Calciferol is prepared. One milligram of this solution is designated as a Unit of vitamin D. This unit now has international recognition and has been made official in the eleventh revision of the United States Pharmacopoeia. In Physiological Reviews 15, 1, 1935, this entire field is reviewed by Bills in a most comprehensive manner. There are over 600 references to the literature on this subject appended to this review.

The Adrenal Cortex

The disease characterized by tuberculous infiltration of the adrenal capsules was described first by the English physician, Thomas Addison, and bears his name, i. e., Addison's disease. There is a progressive anemia accompanying the disease, a bronzing of the skin and death from general exhaustion. A few years ago Swingle and Pfiffner of Princeton, and Hartman and Bromwell of Buffalo, each independently succeeded in isolating from the suprarenal cortex active principles useful in checking the progressiveness of Addison's disease. In cats whose adrenals have been removed death occurs within a few days; when, however, these animals are injected continually with the active cortical extract death may be postponed almost indefinitely. This substance known scientifically as cortin has had wide clinical trial in the treatment of Addison's disease. The drug is useful in the acute relapse and asthenia of the malady and generally satisfactory clinical results are obtained with its continual administration. The cost of the commercial cortin preparations make their use almost prohibitive.

One of the striking achievements in this field is accredited to the ingenious experiments of Arthur Grollman of the Johns Hopkins Medical School. Grollman succeeded in preparing the hormone in a suitable form for oral administration. The glands are extracted with acetone, the acetone is removed and the hormone is adsorbed on charcoal. Epinephrine and the other impurities are removed by washing the charcoal-hormone combination with acid and alkali. The hormone is eluted from its charcoal combination in the gastrointestinal tract and may therefore be fed directly in this form. Also after admixture with the proper diluent the substance may be compressed into tablets.

The chemical nature of this hormone has not yet been unravelled. Wintersteiner and Pfiffner isolated a crystalline substance having the same empirical formula and melting point as the crystals isolated by Kendall of the Mayo Clinic. Their compound, however, had only a negligible activity, which indicates that this is not the active principle of the cortex and more work must be done to solve this problem.

Sex Hormones, Cancer, Coal Tar, Vitamins and Digitalis

The philosopher, Charles Fletcher Dole once said, "To know the truth would be to know how things are fitted or related together." One feels that this quotation is necessary and fitting at this place as a defense for the apparent heterogeneous heading selected for this last portion of the paper. Yet the investigations of the last decade have demonstrated with a remarkable degree of exactitude a definite chemical relationship between these apparently irrelated subjects.

The Japanese, Yamigiwa and Ichikawa, in 1917, produced skin cancer in rabbits by prolonged irritation of the skin with coal tar. Investigations were begun immediately to determine which constituents of coal tar were cancer-producing in character. Kennaway found these in the fraction distilled between 400° and 500° C. which contained only traces of nitrogen and arsenic. He later tested 16 known constituents of coal tar and 24 other aromatic and cyclic compounds. All of these were found to be inactive.

By spectrum analysis of many of the constituents of coal tar, Hieger discovered that the constituent largely responsible for the cancerous growth was 1, 2 benzanthracene. Later the most active substance found was 1, 2 benzpyrene. Seven grams were obtained from about two tons of soft pitch. The substance may also be prepared by direct synthesis. It is of special interest that carcinogenic substances of the 1, 2 benzanthracene type may be obtained from bile acids.

Estrin, the estrus-inducing follicular hormone was obtained several years ago from the fetal fluid of cattle or the urine of pregnant women. Later, Doisy in America and Butenandt in Germany, independently and almost simultaneously announced the crystallization of the substance. Its structure is established and its relationship to the carcinogenic substances, the male sex hormone and vitamin D is very close.

In each one of these molecules responsible for the sex activity calcium metabolism, production of tumorous growth and cardiac stimulation respectively, one finds the ubiquitous phenanthrene nucleus.

Huxley in his Romanes Lecture on Evolution and Ethics stated, "The ethical progress of society depends, not on imitating the cosmic process, still less on running away from it, but on combating it." And so in our progress in the fight against disease with drugs, our success depends upon those heralds of progress who break through the barriers of nature and discover new truths to make life more comfortable and hence make this world a happier place in which to live.

EWING GALLOWAY

NAIL POLISH

By Wm. Van Ostrom
and
R. J. Anderson*

Developments in nail polish during recent years have been marked. The many requirements of polishes under modern conditions are being adequately met by manufacturers.

Women have long recognized the fact that the nails must be given particular attention. The urge to improve on nature has brought fingernails into prominence.

In the early days, powders were used to buff the nails. This process was laborious, however, and the introduction of a liquid which could be merely painted on was a natural evolution. The first liquid polish appeared in 1919 and immediately began to displace the old buffing process. At that time, the polish was little more than a collodion solution which, on drying, left a cellulose film on the nail.

The next trend was toward colored nail polishes, at first very light tints, until now the extremely dark red shades are no longer a novelty.

All liquid nail polishes are made from a nitrocellulose base and, with the necessity for more gloss and better durability, low viscosity nitrocellulose has become a necessity. In considering the question of durability of a nail polish, several factors must be taken into consideration:

1. The nail is human tissue continually growing, and there is a limit to the length of time that a coat of nail polish can be worn, for the natural growth of the nail will make recoating imperative in two weeks.

2. The nail is porous and secretes natural oils, making for uncertainty in the life of a nail polish. First, it introduces a variable factor which cannot be pre-determined. On rare occasions, we hear of a woman who cannot get any nail polish to wear longer than a day or two under ideal conditions; and again, the same person may get varying results from the same bottle of polish under similar conditions. These results, therefore, lead us to believe that the physiological condition of the individual has a bearing on the wearing qualities of a nail polish. If an individual is neurotic or below par physically, nail polish will not last as long as if she were in good health. Also, women afflicted with acid condition have difficulty in getting nail polish to last. These factors are responsible for many complaints on durability of polish.

3. No two people will give the coated nail the same wearing conditions. In formulating a good nail polish, consideration must be given to the treatment this polish may be subjected to under all wearing conditions. It must be flexible enough to withstand flexing of the nails. It must be hard enough to withstand abrasion, such as from typing and housework, and it must be sufficiently water-resistant to withstand washing in hot caustic solutions without any change in gloss, color or appearance. Therefore, durability of a nail polish is subject to wide variations and conclusions can only be intelligently formed on the basis of average results from large numbers of tests.

The viscosity of any lacquer is temporarily affected by changes in temperature, high temperatures reducing

*The Vorac Company.

viscosity, and low temperatures raising it. The nail polish manufacturers must arrive at a mean viscosity, particularly when the polish eventually may be used anywhere from the Equator to the Arctic Circle. For domestic use, however, it is generally advisable to raise the viscosity of the polish in Summer and lower it somewhat in Winter, to assure application at the correct viscosity. If the polish is too thin, it will flow to the edges of the nail, and if it is too thick and gummy, it will not flow out well and will become more susceptible to peeling.

Staining and Sunfastness

The color problem in nail polish has always been the biggest headache to the manufacturers, because so many different shades are now being used, both in creme and transparent.

In selecting dyes, color, sunfastness and staining must be considered. If a color stains the nail, it must be rejected immediately, since the dye penetrates the pores of the nail and cannot easily be removed. Incidentally, the most brilliant colors are the worst stainers. In creme polishes, however, the tendency is now towards pigment colors and these have the added advantage of being much more light-fast and free from tendency to stain.

Flow and Application

As nail polish must necessarily be applied by brushing and the allowable time for drying is a matter of seconds, the resulting flow or smoothness of the coat is of paramount importance. Great care must be taken in the choice of solvents in order that they may evaporate evenly and rapidly to insure a smooth, dry film. If the lacquer solvents are not balanced in this manner, it is well nigh impossible for the average operator to apply a coat of colored polish without producing a streaky effect.

In selecting solvents for nail polish, the following facts must be studied: No solvents having a deleterious effect upon the nails may be used. Only solvents with the mildest odor may be used. As nail polish must dry in a definite time, solvents which will induce the correct drying time in the lacquer must be employed. No single solvent will accomplish this result; therefore, a blended solvent mixture is essential. In order for a lacquer to dry smoothly, the solvents must evaporate from the film at a uniform rate and, in order to accomplish this mixture of solvents of fast, medium and slow evaporating rates are used. To mention some of the more common solvents: ethyl acetate, isopropyl acetate, butyl acetate and the glycol ethers. It is also permissible to use a latent solvent, such as ethyl alcohol, isopropyl alcohol or butyl alcohol. Lacquer diluents, such as the hydrocarbons and petroleum distillates, should be avoided.

Difficulty in application of nail polish led to development of creme nail polishes a few years ago, for the primary purpose of simplifying application. Creme nail polishes are more opaque and any variation in the thickness of the coat is not as readily apparent. Creme polishes have the added advantage of hiding blemishes on the nail and have become widely adopted by beauty parlors. As previously mentioned, color possibilities are much greater because pigments may be employed with soluble dyes, to produce all tints or shades. These colors have the added advantage of wearing better, particularly in dark shades. Most soluble colors, when used in high concentration to obtain dark shades, impair the film strength of the polish.

Brittle Nails

A great deal of publicity has been given recently to the subject of brittle nails by manufacturers of preparations for conditioning and lubricating the nails. While these preparations may have some effect on brittle nails, it is much more important to use polishes and removers which do not dissolve the natural oils and waxes out of the nails.

Until recently, acetone was used widely as a remover of nail polish, but this material has a decided tendency to dry out the nails. Use of acetone as a remover has diminished considerably and we now have creme removers which are beneficial. Solvents, such as hydrocarbons, amyl acetate, etc. used in the cheaper polishes, also have a tendency to dry the nails and should be avoided.

In better polishes, adhesion is obtained by using high grade plasticizers, which when applied, produce a film which remains flexible during the life of the polish.

Plasticizers

Plasticizers are used in lacquer to soften the film and induce flexibility. If no plasticizer were used, a lacquer film would be extremely brittle and have little adhesion. There are a great many lacquer plasticizers but, as already mentioned regarding solvents, care must be used in their selection when formulating nail polish. The first consideration is the neutrality of the plasticizer for, as can be readily understood, the plasticizer in a nail polish remains in contact with the nail as long as the polish is worn and, unlike solvents, it does not evaporate.

Lacquer plasticizers fall into two groups, namely, liquid and solid. Liquid plasticizers produce very soft, flexible lacquers, while the solid plasticizers produce harder film. Therefore, the proper degree of flexibility is obtained by blending these products. Liquid plasticizers which may be used are dibutyl phthalate, diamyl phthalate, castor oil, etc. Examples of solid plasticizers are camphor and some of the synthetic resins.

Nail polish, due to the flexing of the nails, must be flexible and at the same time hard enough to withstand abrasion. In order, therefore, to get this two-fold property, both types of plasticizers must be employed.

(Continued on page 64)

EWING GALLOWAY

EMOLLIENT and ASTRINGENT LOTIONS

By A. Richard Bliss, Jr., Phm.D., M.D.

Lotions or "*washes*" are liquid preparations intended for application without friction, and employed chiefly for epidermic action. If the entire body or a portion thereof is immersed in this type of preparation, the lotion is then called a *bath*. When a lotion is applied on gauze, absorbent cotton or other suitable material, it is spoken of as a *compress*. A lotion used for the eyes is known as an *eye wash*, *eye drops* or *collyrium*. When a lotion is used for the throat, it is called a *gargle*. Lotions introduced into the passages of the body by means of a syringe or other suitable appliance are termed *injections*, in the event they are permitted to remain in the passages for a short period of time; but when the outflow is permitted to balance the inflow, the term "*irrigation*" is used; for example, nasal, aural, urethral and ophthalmic irrigations. Rectal injections are known as *clysters*, *lavements*, or *enemas*. This article will be limited to discussions of applications for the skin.

Lotions for use on the skin usually do not penetrate that body surface. Ordinarily, they are applied by means of absorbent cotton or other absorbent fabric. Some are permitted to dry on the skin, while others are intended to keep the skin moist, these being applied on some fabric which is then covered with waterproof material or bandaging. The more common solvents or vehicles used in the manufacture of lotions are water, alcohol and glycerin.

Some lotions are simple solutions; others are colloidal solutions, suspensions, or emulsions; while some are prepared by saponification. They differ also in reaction to indicators, some being neutral, others acidic or basic. The condition of the epidermis and the hoped-for effects of the lotion are the major factors which determine the choice of the solvent or vehicle, and of the reaction. For example, when the epidermis is intact, alcohol might be used, but if the skin surface is broken alcohol if used at all must be well diluted to prevent irritation of the denuded area. If the skin is highly inflamed, even water will prove irritating, and when this is the case water should not be applied unless rendered isotonic by sodium chloride, boric acid, or some other nonirritating agent. Under similar conditions, glycerin, even in a dilution as low as 5 per cent., may prove objectionable, since this compound is hygroscopic when used in fair concentration. When the skin is unbroken and not very sensitive, 5 per cent. or less of glycerin is frequently added to lotions to prevent complete drying, and to exert an emollient action. The addition of alcohol to aqueous lotions increases the rate of evaporation and thus enhances any cooling effect, and at the same time imparts some degree of astringency. In the development of formulas it is important to adjust the concentration of the active ingredients of a lotion to the average sensitiveness of the area for which the preparation is intended, and to the abnormal conditions for which the lotion is to be used. Lotions are most conveniently classified according to their actions.

Emollient lotions soothe, soften and relax the skin, and are used in acute inflammatory skin conditions which manifest a tendency to dryness. Many of them,

therefore, contain some oily ingredients which is often present in a state of emulsification. This type of lotion is commonly referred to as a "*cream lotion.*" They are never rubbed in, and are intended purely for epidermal action. Many dermatologists prefer weakly alkaline lotions, although more recently lotions of acidic reaction have been advocated by some groups. The most common alkaline ingredient is probably Lime Water. Nondrying oils, such as olive oil, are preferred to linseed oil as ingredients of emulsified oil-containing lotions, because of the tendency of the drying oils to form unslightly, sticky varnishes which are difficult to remove. Insoluble ingredients, like calamine, zinc oxide, zinc stearate, calcium carbonate, sulfur, etc., are common additional ingredients of lotions of this class. A typical example is the so-called Calamine Lotion of the National Formulary, which consists of:

Prepared Calamine	8 parts
Zinc Oxide	8 parts
Olive Oil	50 parts
Lime Water, to make	100 parts

The calamine and zinc oxide are thoroughly mixed with the olive oil, and the lime water is gradually added with constant trituration. This lotion must be thoroughly shaken, of course, before applying it to the skin. In the event it is desired to use glycerin in the place of olive oil, the latter may be replaced in the foregoing formula with 20 parts of glycerin. When the local, noninjurious effects of phenol are desired, these may be obtained by adding from one-half to one per cent. of liquefied phenol to the formulas. Sufficient quantities of appropriate perfumes and colors may be added, of course, as desired. A popular perfumed lotion is prepared by the following formula:

Prepared Calamine	10 parts
Zinc Oxide	5 parts
Glycerin	5 parts
Rose Water, to make	100 parts

Probably the most common lotion in this class is the so-called "*hand lotion.*" Many of them contain an emollient gum, tragacanth and quince seed being preferred to acacia. Several formulas which may be used as the basis of experimentation are given below. The oldest of the simple formulas is that for "Glycerin and Rose Water," which consists of a mixture of equal parts of Stronger Rose Water and glycerin.

Glycerin Milk

Mucilage of Quince Seed	70 parts
Powdered Soap	1 part
Boric Acid	2½ parts
Alcohol	2 parts
Glycerin	25 parts

Perfume and Color, as desired.

Tragacanth Lotion

Tragacanth, ribbon	*0.8 part*
Boric Acid	1.6 parts
Glycerin	*12.0 parts*
Alcohol	12.0 parts
Water	*75.0 parts*

Perfume and Color, as desired.

Witch Hazel and Benzoin Lotion

Tragacanth, ribbon	0.75 parts
Glycerin	6.25 parts
Witch Hazel	6.25 parts
Tr. of Benzoin	0.40 part
Liquefied Phenol	.75 part
Oil of Rose	0.10 part
Alcohol	6.25 parts
Water, to make	100.00 parts

Color, as desired.

Quince Lotion

Quince Seed	1.6 parts
Boric Acid	0.6 part
Sodium Borate	0.6 part
Glycerin	12.0 parts
Alcohol	12.0 parts
Water, to make	100.0 parts

Perfume and Color, as desired.

Almond Lotion

Blanched Almonds	4 ounces
Curd Soap	½ ounce
Oil of Bitter Almonds	10 minims
Oil of Bergamot	1 drachm
Alcohol	4 ounces
Rose Water	12 ounces

Dr. Pusey's Gum Lotion

Oil of Rose	0.05 part
Oil of Lavender	0.10 part
Oil of Bergamot	0.20 part
Tragacanth	5.00 parts
Boric Acid	15.00 parts
Glycerin	15.00 parts
Water, to make	1000.00 parts

The two formulas immediately above may be used as "*detergent hand lotions*" by rubbing them freely over the skin and then wiping the hands dry. They are useful when soap is too irritating, as during the cold season when less fat is secreted by the skin glands and the skin shows a tendency to become chapped.

Lemon or Acidic Lotion

Pectin	2.5 parts
Lemon Juice	9.5 parts
Benzoic Acid	0.15 parts
Water, to make	100.00 parts

Perfume and Color, as desired.

Alkaline Lotion

Sodium Borate	0.5 part
Glycerin	5.0 parts
Water, to make	100.0 parts

Perfume and Color as desired.

Neutral Lotion

Diethylene Glycol	3 parts
Glycerin	5 parts
Alcohol (40%)	92 parts

Glycerin Lotion

Glycerin	4.0 parts
Triethanolamine	0.5 part
Alcohol	30.0 parts
Water	65.5 parts

Perfume, as desired.

White Lotion

Talc	0.5 part
Zinc Oxide	0.5 part
Glycerin	1.0 part
Water, to make	100.0 parts

Perfume, as desired.

Astringent Lotions

Astringent lotions produce a condensation of the tissue resulting in shrinkage, pallor due to constriction of the blood vessels, checking of secretion or exudation, and decreased sensitiveness. The astringent lotions, consequently, are of value in those conditions in which water alone and the alkaline lotions, which are prone to cause swelling, are contraindicated. It must be kept in mind that astringent lotions should not be used during the early inflammatory stages of bacterial invasions, for, although they may lessen the acuteness of the inflammation, they tend to prolong the condition and to interfere with the defensive possibilities of inflammation itself. They should be used only after the microbial invasion has been checked. Astringent agents differ among themselves in astringent power. They produce their astringent effects (1) by abstracting water from the tissues, (2) by constricting the arterioles, or (3) by precipitating proteins from the superficial cells. Astringents which act by the abstraction of water from the tissues or by the precipitation of proteins are potential irritants, and the degree of concentration, consequently, is an important factor in the manufacture of lotions containing such agents. Arranged by the intensity of their condensing effects in relation to water, the more common astringents place themselves in the following descending order: Tannic Acid (3 to 1 per cent.) > Aluminum Acetate > Lead Lotion > Boric Acid > Resorcinol > Tannic Acid 1 per cent. *plus* Salicylic Acid 0.1 per cent. > water. In the event too strong a precipitant action is produced, crusts tend to form, and these, acting as foreign bodies, cause an accumulation of fluid beneath them and thus increase or start anew the irritation. A saturated, aqueous solution of boric acid is nonirritative, but the degree of astringency is so slight that most writers do not classify it among the astringents.

A valuable astringent preparation is "Burow's Solution" (Solution of Aluminum Acetate, N. F.). It is more powerful than the preparations already discussed, but it is also more irritating. It contains about 5 per cent. of aluminum acetate, and should be diluted with from 5 to 10 parts of water before being applied to inflamed skin. It is more safe for the manufacturer to put up dilutions of proper strength, than to dispense stronger concentrations with dilution instructions for the user. Alum is more powerful and irritative, and its applications more suitable for the intact, undiseased skin. For excessive sweating, a hot 2 per cent. aqueous solution is effective. A saturated solution of alum in *diluted alcohol*, in which the compound is but slightly soluble, is a valuable preparation for hardening the skin, as in preventing bed sores. Metallic salts of the zinc phenolsulfonate type are also among the commonly used mineral astringents. The formulas which follow will be found useful as starting points in experimental and development investigations. Many of the more common astringent lotions depend upon alcohol or an alcoholic ingredient for their basic astringency.

Mild Astringent Lotion

Zinc Phenolsulfonate	8.0 ounces
Camphor	0.4 ounce
Menthol	0.4 ounce
Perfume	0.8 ounce
Alcohol	1.0 gallon
Witch Hazel, to make	10.0 gallons

Color, as desired.

Medium Astringent Lotion

Borax	0.2 ounce
Zinc Phenolsulfonate	6.4 ounces
Camphor	0.8 punce
Perfume	0.8 ounce
Alcohol	3.5 gallons
Glycerin	0.3 gallon
Water, to make	10.0 gallons

Color, as desired.

Strong Astringent Lotion

Menthol	0.8 ounce
Ethyl Amino Benzoate	0.8 ounce
Parachlor Metaxylenol	0.8 ounce
Vanillin	0.8 ounce
Thymol	0.4 ounce
Lavender Oil	0.3 pound
Glycerin or Diethylene Glycol	0.5 gallon
Alcohol	5.0 gallons
Water, to make	10.0 gallons

Color, as desired.

Astringent Bath Lotion

Alum	0.5 part
Boric Acid	2.0 parts
Camphor	0.3 part
Alcohol	24.0 parts
Water, to make	100.0 parts

Perfume and Color, as desired.

Astringent Shaving Lotion

Boric Acid	5 ounces
Menthol	2 drachms
Glycerin	10 ounces
Alcohol	10 quarts
Water, to make	10 gallons

Perfume and Color, as desired.

Astringent Hand Lotion

Tr. of Benzoin	3 parts
Spirit of Camphor	14 parts
Bay Rum	35 parts
Witch Hazel, to make	100 parts

(Continued in the August issue.)

THE CHEMISTRY AND PHYSIOLOGY OF VITAMIN A

By R. Schuler*

True knowledge of the vitamins is constantly increasing. In this article Mr. Schuler presents the latest knowledge concerning the first of the vitamins.

Each day the various scientific journals of the world bring some new announcement of a further advance in the knowledge of vitamin chemistry or biology. One day it may be a discovery revealing a hitherto, totally unsuspected relationship between vitamins and life processes; another day it may be a disclosure of an important advance in the knowledge of the chemical structure of these vital materials. In fact, the task of keeping abreast of new developments is a most formidable one and is, generally, beyond the limited time available to the interested person. As an example of the prolific output of scientific publications in this field, may be stated that during the year 1911 only 47 papers appeared on the subject of vitamins, whereas in 1930, fully 1500 papers were published dealing with these important substances in the realms of agricultural, chemical, medical and physiological research. The purpose of this account, therefore, is to briefly summarize the present status of the biology and chemistry of vitamins, beginning with vitamin A, which will be discussed in this issue, and continuing with the other vitamins in succeeding numbers of this publication.

An interesting sidelight on this subject is the relatively rapid adoption of laboratory and clinical results, and their translation into terms within the experience of the layman, in the form of vitamin products. The dollar volume of drug store vitamin sales is estimated to be higher than $50,000,000 annually, and is constantly growing. Within the past four years, for example, vitamin products have jumped from tenth to third place in importance in the sales of drug store products. Vitamin sales are surpassed only by those of laxatives and cold remedies. The exigencies of modern life with its highly refined foods, diets and irregular living habits, make the consumption of vitamin products imperative.

Vitamins are substances occurring in minute amounts in foods of animal and plant origin. Their presence in adequate quantities in the diet is absolutely essential for the maintenance of good health in man and animal. They are distinguished from the other necessary ingredients of foodstuffs such as fats, proteins, carbohydrates, mineral salts, water, etc., by the incredibly small quantities required in an adequate diet. Thus, many grams of proteins or carbohydrates are required daily in contrast to the few milligrams of vitamins necessary. In spite of the small requirement, a diet must be well-balanced with respect to these materials as well as with the other dietary factors. Unles vitamins are consumed in adequate quantities, the normal functions of the body are seriously impaired, and such dreaded diseases as beri-beri, pellagra, scurvy, and rickets may result.

Although these vital materials are grouped together under the class name "vitamin", they actually have very little in common. In fact, the only relation between them is that they are organic chemical compounds and are essential to health. There is no similarity, whatever, in their chemical structures, and their functions in the body bear little resemblance to one another. Furthermore, no one vitamin can take the place of another, but all are essential to well-being.

The first intimation that small amounts of materials other than the usual fats, proteins, carbohydrates, salts and water, were essential to life, was made by Lunin of Switzerland in 1888. He found that rats died when maintained on a synthetic diet composed of these well-known foodstuffs. This result led him to believe that perhaps a few milligrams per day of some unknown materials were necessary to maintain life. Similar investigations by other workers followed, and all confirmed Lunin's results. For example, in 1905 Pekelharing, of Holland, succeeded in sustaining life in rats on a synthetic diet, by including small quantities of milk. Another investigator, Stepp of Germany in 1909, fed a group of mice on bread and milk, which had been previously extracted with alcohol and ether, and the

*Research Laboratories of Stanco Incorporated and Daggett & Ramsdell.

mice died. By returning this alcohol-ether extract to the treated bread and milk, however, he was able to keep other groups of mice alive. In 1912, Hopkins of England maintained rats on a synthetic diet by including with it 2 to 3 cc. of milk per day. The thoroughness of his work definitely established the fact that natural foods contain small quantities of materials essential for the maintenance of life, other than the well-known fats, proteins, carbohydrates, salts, and water.

Shortly thereafter, the "vitamine hypothesis" was propounded by Funk. The latter, a biochemist at the Lister Institute in London, was attempting to isolate in pure form the anti-beri-beri substance contained in rice polishings. He succeeded in extracting an active material which he called the "anti-beri-beri vitamine," the "amine" designating the fact that he believed the compound to be an amine, and the "vit" indicating its vital relation to life. It may be mentioned that the letter "e" has since been dropped, and the word is now "vitamin." This change was made when it was realized that vitamins do not contain amine groups.

Funk further suggested the probable relationship between the diseases beri-beri, scurvy, and rickets, and the minute quantities of unknown substances recently proven by Hopkins and others to be essential to life. He suggested the presence in natural foods of four different vitamines; an anti-beri-beri vitamin, an anti-scurvy vitamin, an anti-pellagra vitamin, and an anti-rickets vitamin.

Two years later in 1914, vitamin A was discovered by McCollum of the United States. While performing feeding experiments on rats, he discovered a substance in butter which exerted a stimulating effect on growth. He found, for example, that rats fed on pure casein, starch, lactose, agar-agar, salt mixture and lard soon began to lose weight, but immediately gained weight when an ether-extract of butter was added to their diet. He called this unidentified dietary factor "fat soluble A." Later when it was realized that "fat-soluble A" cured and prevented the eye condition caused by experimental diets, the name was changed to vitamin A to conform to Funk's "vitamine hypothesis."

This pathological eye condition had been known for a long time before the vitamin hypothesis. In 1848, a publication entitled "Treatise on Cold Liver Oil" described an eye disease and its cure by the consumption of cod liver oil by mouth. In 1904, Mori of Japan, reported the successful cure of the eye disease of undernourished children by the administration of cod liver oil. These early investigators, however, failed to realize the significance of their observations.

Having briefly summarized the early history of vitamins in general, and vitamin A in particular, the biology, occurrence and chemistry of vitamin A will now be discussed.

The absence of an adequate supply of vitamin A in the diet is responsible for certain failures in the normal functions of the body. A pathological condition of the eye is produced which is known as xeropthalmia. In children, the eye may become infected and blindness sometimes results. In adults, the eye does not usually become infected, but the victim suffers from night-blindness. Night-blindness is characterized by the inability to see in dim light. Rats and other animals are also affected in a similar manner. Because of its relation to eye conditions, vitamin A is sometimes referred to as the antiopthalmic vitamin. Instances of this affliction are found in India, China, Dutch East Indies, Newfoundland, Labrador, and Brazil.

A recent investigation by Jeans and Zentmire of Iowa city resulted in a new method for determining vitamin A deficiency, based upon the ability of individuals to adapt their eyes to the dark. The patient is instructed to look into one end of a dark tube, and from the other end are projected spots of light shining through a perforated metal disk. The amount of light necessary before the patient can see all of the spots is taken as an indication of the presence or absense of an adequate supply of vitamin in the body.

An examination of several groups of children by this new procedure disclosed the following percentages of children deficient in vitamin A:

Rural group—26%.
Village group—53%.
Urban group of a high economic level—56%.
Urban group of a middle economic level—63%.
Urban group of a low economic level—79%.

Upon the administration of vitamin A, a prompt improvement in the ability of the test patients to adapt their eyes to the dark was observed.

The role assumed by vitamin A in this connection seems to be in the production of a coloring matter called "visual purple" which is found in the retina of the eye and is essential to clear vision. A recent investigation by Wald of Harvard indicates that the living animal transforms vitamin A into "visual purple" which, in turn, is transformed by light through several intermediate stages back to vitamin A. The vitamin A is then re-synthesized to visual purple, thus completing the cycle. Unfortunately, however, this cycle is not a perfect one, and some vitamin A is evidently lost in the process, thus necessitating a continuous supply through the consumption of the proper food.

Vitamin A is sometimes called the anti-infective vitamin. This term is somewhat misleading, as the consumption of large quantities of vitamin A will not prevent colds, blood poisoning, pneumonia, scarlet fever, tuberculosis, or similar infections. It has been definitely proven that animals deficient in vitamin A possess the same power as normal animals to form antibodies in the blood to combat disease germs invading the blood stream. In fact, post-mortem examinations of people who have died of these afflictions, disclosed ample reserves of vitamin A in the liver, where the body customarily stores this vital material. The reason for associating vitamin A with infection may be attributed to the frequent occurrence of disease in deficient animals. This is easily explained by the fact that a deficiency in vitamin A alters the character of the

mucous membranes to such an extent that they are unable to combat disease germs, and afford an ideal breeding place for any chance microorganisms alighting on these dry areas. Evidently, when vitamin A is lacking, the cells of the mucous membrane fail to secrete an adequate supply of mucous. The result is a complete change in character and appearance of the mucous membranes—they become dry, horny, flaky, and resemble ordinary external skin. The formation of stones in the kidneys and bladders of vitamin A deficient animals, reported by one investigator, may also be the result of such alterations in the linings of these organs.

Another effect produced by a deficiency of vitamin A in the diet is a degeneration of the bone and tooth cells resulting in an abnormal structure of these parts. The cells of the nervous system also tend to degenerate with a consequent loss of muscular coordination manifested by a staggering gait or by spasms. An unhealthy condition of the skin, indicated by the prevalence of boils and pimples may also appear.

The richest sources of vitamin A are in the livers of mammals such as oxen and sheep and in fish liver oils such as cod, halibut, salmon and swordfish. The sources next in importance are in such plants as green lettuce, green peas, turnip greens, spinach, carrots, apricots, and in such animal products as butter, egg yolk, cheese, cream and liver. As secondary sources of supply, the following are of importance; green asparagus, green beans, green cabbage, dried green peas, green peppers, yellow corn, yellow pumpkin, yellow sweet potato, squash, tomato, oranges, peaches, prunes, pineapple, cantaloupe, bananas, avocado, whole, fresh, dried or evaporated milk, and oysters. It is interesting to note that vitamin A occurs as such in fish and animal livers, but in fruits and vegetables it is present as the provitamin A. The term provitamin designates a compound which is converted by the body into a vitamin. In this case, the provitamin A is an orange-colored compound called carotene, which is converted to vitamin A in the liver.

There are now known to be four natural provitamins A, that is, four compounds occurring in nature which are transformed in the body of man and animal to vitamin A. These are alphas-carotene, beta-carotene, gamma-carotene and cryptoxanthin.

Vitamin A has not yet been synthesized, but concentrated extracts, rich in vitamin A and provitamin A, are commercially available. These are prepared from cod liver oils and from such vegetables as carrots and spinach. One of these concentrated extracts consists of a mixture of alpha and beta-carotenes, and is said to be equivalent to a vitamin A potency as high as 2,800,000 U. S. P. XI units per gram. Cod and halibut liver oil concentrates are also available ranging from 55,000 to 140,000 U. S. P. XI vitamin A units per gram. These fish liver oil concentrates also contain vitamin D. The content of the latter usually varies from 5,000 to 20,000 U. S. P. XI units per gram. It is interesting to note the difference in potencies of these concentrates with that of ordinary U. S. P. Cod Liver Oil, which contains 600 U. S. P. XI vitamin A units, and 85 U. S. P. XI vitamin D units per gram.

Although the chemical structure of vitamin A is known, no chemical method has yet been devised which is a direct measure of its biological activity. A chemical test is in common use, however, which gives some indication of the presence of vitamin A. This method depends upon the blue color formed when arsenic or antimony trichloride are added to a chloroform solution of vitamin A. The color thus developed is measured by a comparison with colored glasses in a Lovibond tintometer.

Recently attention has been focused upon the possibility of developing a spectrophotometric method of determining vitzmin A, based upon the selective absorption by this vitamin of the ultra-violet region of the spectrum at 3280° angstrom units. The measurement of this absorption may be made by means of expensive high-precision spectrophotometers, or by the relatively low-priced instrument especially developed for this purpose known as the Vitameter. Thus a vitamin A determination may be performed within a few minutes as compared with the laborious biological methods which require several weeks for completion. This new method is being carefully studied, and may be recommended as a standard procedure for the determination of vitamin A, as soon as its reliability has been definitely established.

An accurate determination of the vitamin A content of a material may only be determined by means of animal feeding experiments. The United States Pharmacopoeia XI describes in detail the method adopted in this country. Briefly described, it involves feeding a group of white rats on a normal diet except for a deficient supply of vitamin A or provitamin A, until they manifest the characteristic symptoms of vitamin A deficiency, namely, declining weight and the pathological eye condition known as xeropthalmia. At this point, vitamin A is added to the diet in the form of the sample under test, and the daily dose in milligrams of the assay oil necessary to produce a gain in weight of 12 grams or more during a twenty-eight day period, is compared with the quantity of U. S. P. "Reference Cod Liver Oil," which produces the same result. The reference oil, which is of a known vitamin content, may be obtained from the Pharmacopoeia Board of Trustees. One United States Pharmacopoeia Unit of Vitamin A is equal, in growth promoting and antiopthalmic activities for the rat, to one International Unit of Vitamin A as defined and adopted by the Conference of Vitamin Standards of the Permanent Commission on Biological Standardization of the League of Nations. This unit is equivalent to the vitamin A activity of 0.0006 milligrams of pure beta-carotene.

The foregoing account has briefly touched upon the important developments in the chemistry and physiology of vitamin A. In concluding, it should be emphasized that the last chapter in the story of vitamin A is far from completion.

(Note: A similar survey of the status of vitamin B will follow in the next issue.)

VI-SYNERAL, product of the H. E. Dubin Laboratories of the U. S. Vitamin Corp. consists of tubes containing an equal number of black and gray pills. The black pills are vitamin concentrates of vitamins A, B, C, D, E, and G, while the gray pills contain important minerals. One of each kind of pill are taken before meals.

FLORAQUIN, a new contribution to medicine developed in the research laboratories of G. D. Searle & Co., is offered as an improved treatment for leucorrhea, trichomonas vaginalis, and associated conditions. Tablets are of a distinctive shape and are packaged in lots of twelve and twenty-four.

Coty presents PETITS MODELES, tiny flacons that reproduce every detail of the larger originals—A Suma, Fernery at Twilight, Styx, Jasmin, Le Nouveau Gardenia.

SCENTALL ICE COLOGNE, packed in a transparent carton to give the effect of an ice cube box, is presented by Cassell Products.

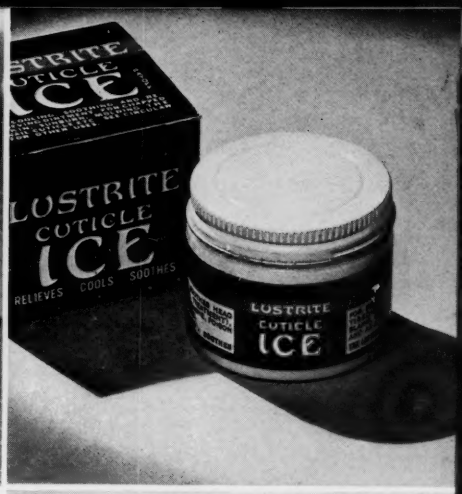
PETALSKIN TOILETRIES now offers Cream Pastelle, a powder base and also a face tonic.

McKESSON & ROBBINS' American Gentlemen's Set for 1936 is marked by smart styling and inclusion of a large size package of Calox Tooth Powder. The package is lettered in blue with gold bands.

LUCIEN LELONG has recently brought out an eau de cologne. "Glace—a cooling cologne," it is called and comes in two sizes, in a typical Lelong bottle.

GASTON DE PARIS' Eau de Cologne has a fresh flowerlike fragrance. It is ideal for the bath and for traveling as its cooling effect banishes fatigue and freshens the user.

SOLON PALMER'S eau de cologne is now available in a 12-oz. size.



CONTI PRODUCTS CORP., New York, present a new summer item, the Conti Beach Kit. It contains Conti Beach Tan Oil, which is a new product, Conti Castile Shampoo and Conti Castile Soap.

LUSTRITE CUTICLE ICE is a new product described as a cooling, soothing, and relieving ointment for chapped skin, sunburn, molding the nail cuticle, and similar uses.

MOLINARD'S Aromatic Essence Pour Bains softens the water and has a refreshing aromatic odor. Sole distributor in U. S.: Pierre Amouroux.

BIENAIME, distributed in the U. S. exclusively by Pierre Amouroux, presents two new packages, Bienaime dusting powder and talc.

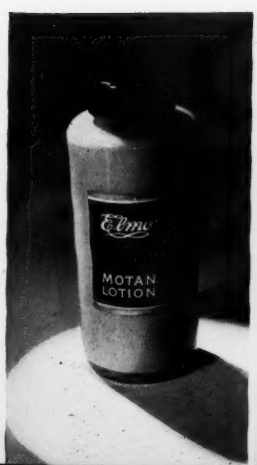
GUERLAIN'S new cream rouge comes in shades to match all Guerlain lipsticks, in an attractive ivory container with "Guerlain" in gold lettering. The Guerlain shades suggested for summer make-up are Guerlain's Orange and Tropical Lipsticks, with rouge to match.

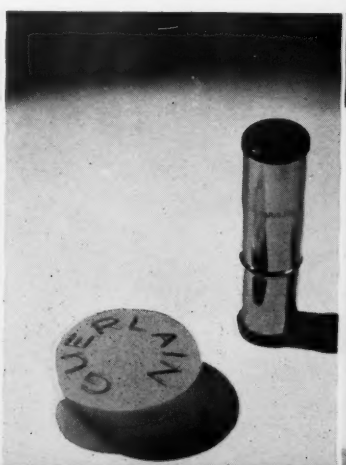
MALLINCKRODT CHEMICAL WORKS have switched their entire line of some 1,500 prescription, photographic, and reagent chemicals to plastic-capped jars. Photo courtesy General Plastics.

CUTEX introduces an oily cuticle remover that serves two purposes: removes cuticle and contains oils which benefit both cuticle and nail.

DESIGNER JOSEPH FEDERICO has developed a new conception of plastic jar contours and design. Objections to wide-mouth squat jars are overcome by close precision tolerances possible in plastic material, and tighter compression on the liner made possible by square threads and by having cap and jar threads of same material. Photo courtesy of General Plastics.

ELMO'S "MOTAN" LOTION is to be applied liberally before exposure to the sun for an even coat of tan.





KATHLEEN MARY QUINLAN'S travel kit contains a complete selection of Quinlan preparations for skin conditioning, make-up, and bath. A smaller kit is also available.

LUCRETIA VANDERBILT, INC., Bridgeport, Conn., have introduced entirely new packages in the Lucretia Vanderbilt Deluxe double compact, lipstick, face powder, and suntan oil.

CREME OF MILK, a new all purpose facial creme made from fresh dairy milk has recently been introduced on the West Coast by Duart Sales Co., Ltd. Reception has been so excellent that company is now on a nationally advertised basis.

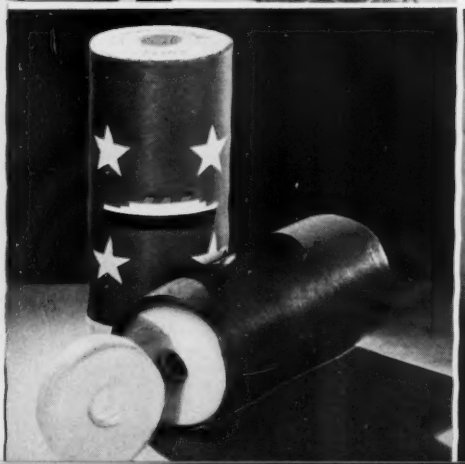
VIRGINIA YOUNG'S COSMETICS, Minneapolis, illustrate clever handling of stock containers and caps. Clear glass containers are used through which the white and pastel colored contents show, and contrast well with the rich, deep black of the molded cap. Narrow band label printed black on gold foil is used around the top of the bottles. Photo courtesy General Plastics.

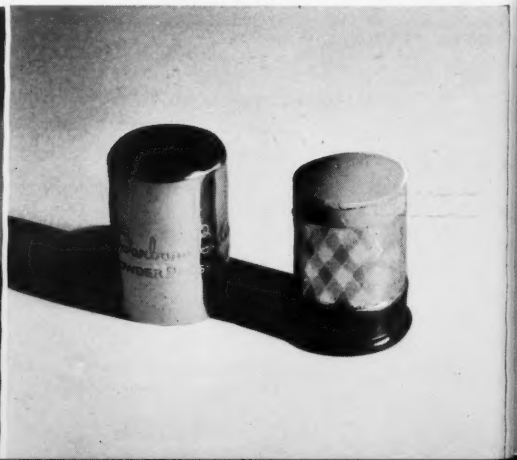
CIRO'S newest odor is called "Camelia de Maroc," inspired by the vogue for camellia flowers as corsages.

Four items of the long LARKIN line are shown. Caps are of black and colored Durez molded by Armstrong Cork Products Co.

KERK GUILD: the SS Bon Voyage is a new package created by Lester Gaba of Kerk Guild, New York. The tubular package contains five cakes of soap in the shape of life-savers, scented in Gardenia odor.

BARBARA BATES has recently introduced an attractive powder nail polish stick. It looks like a big fat lipstick. The pink in the powder will not "pink" the nails.



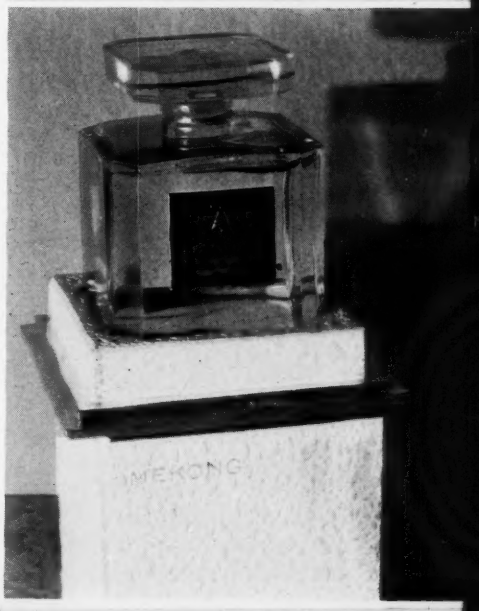


ROYALE BATH COLOGNE is a product of Allen B. Wrisley Co., offered for those who find rubbing alcohol offensive in odor. Photo courtesy Owens-Illinois Glass Co.

McKESSON & ROBBINS have developed a new formula for their Burntone, which is now based on tannic acid compounded in a slow-drying jelly base. The formula appears on the carton.

ALMAZ HAIRSTICK, which is used for retouching the hair between tinting and is not a dye, is now also available for bleached hair.

HOUBIGANT'S new "Paris Fashioned" vanity comes in six different color arrangements, and not only does it match or complement women's costumes, but serves as an efficient type of vanity. It can be had in either loose or compact powder form with compact rouge.

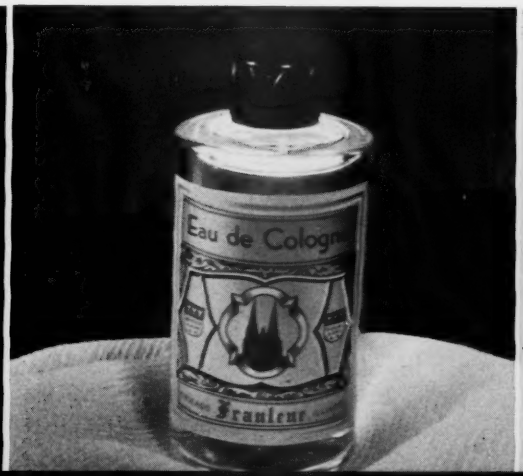


FRANLENE is offering a new Eau de Cologne of 88 per cent alcoholic strength. The company, located in Naperville, Ill., is offering this product as their first item. Later they plan to offer other liquid toiletries.

LUBIN'S newest perfume "Mekong" will be available August first, in one size only. The odor is described as "Oriental bouquet."

SUNSOL, an orange-flavored emulsion of cod liver oil is offered by Sunsol Products Co., Chattanooga, Tenn. The container, supplied by the Owens-Illinois Glass Co., is a stock design wide-mouth amber bottle which has been developed into an attractive package by distinctive label and cap treatment and overall cellophane wrapping.

Two new additions have been made to the HOUBIGANT GARDENIA line—toilet water and dusting powder. Both items can now be had in the same black and white type presentation as the perfume and face powder.



Nail Polish

(*Continued from page 53*)

Polishes of this type may be recognized by the absence of a "banana oil" odor and the fact that, while their surface drys fast, they take longer to develop their final hardness.

Since the advent of nitrocellulose lacquers, the effect of high humidity has always been a problem. When a lacquer dries, the evaporation of the solvents cools the surface and if the surface is cooled below the dew point of the atmosphere, the moisture from the atmosphere will condense on the surface of the lacquer, producing a white cloudy effect. This condition is known to the lacquer trade as blushing. The faster a lacquer dries, the more susceptible it will be to blushing, and the usual remedy is to retard the drying. However, lacquers which contain solvents miscible with water have more tendency to blush and these solvents should be used cautiously in hot weather. Ethyl alcohol is perhaps the worst offender in this respect and, while it has its usefulness in lacquer formulation because of its solvent power for dyes, the percentage should be kept at a minimum in summer.

As previously stated, the base of all nail polish is nitrocellulose. When this material comes in contact with the body, the purity is extremely important for free acid will make the nail brittle. Nitrocellulose is sold in varying viscosities, but for high grade work such as nail polish, where low viscosity and high solids are essential, only ¼ or ½-second viscosity should be used.

Two simple tests which may be made to determine quality, flexibility and durability in nail polish are as follows: First pour a small amount of two or three different kinds of polish about the size of a half dollar on a slab of glass. Run surplus off and allow to dry over night. Then immerse in water for ½-hour. With a pen knife pick up the edge of the film and note that the poorer quality of polish will come off in strips while the better quality will come off in a sheet and remain elastic to allow of bending, creasing, etc.

The second test is this. Likewise run a small amount of two or three kinds of polish, about the size of a half dollar, on a glass. Touch a match to each one in turn and it will be noted that some will burn out to a complete ash while others will show remaining a substance of wet, adhesive material which is not destroyed and which signifies elasticity and durability.

Baby Specialties

(*Continued from page 48*)

We have not mentioned perfume in the above formula. This is optional with the manufacturer. It is customary to sell a delicately perfumed article, with just a suggestion of medication. The trisodium phosphate in the formula is used.

Infant's glycerin suppositories are mechanical aids in securing evacuation. They usually are made of glycerin usually according to the official formula, which is as follows (USP XI).

Glycerin	92.	grams
Sodium stearate	8.	"
Distilled water	5.	"

The glycerin is heated to 95° C. in a suitable vessel, the sodium stearate is added and stirred until dissolved at which time the water is stirred in. The official directions indicate that the individual may make his own sodium stearate with stearic acid and any suitable alkali. Most manufacturers prefer to do this, as it is not only cheaper but results in a more uniform and satisfactory product. The suppository mass is poured into molds having cavities about a quarter inch in diameter and two of two and a half inches long. The molds are recessed on the top to provide for an overfill and the mold scrapings are melted up again for recasting. The molds and the molding procedure is similar to the molding of lipsticks.

Baby foods are hardly within the province of general pharmaceutical manufacture as their proper preparation requires a special technic and special equipment. Besides the market in this country centers around a few established names. It is rather a branch of the food industry than the pharmaceutical.

Diaper rinses are intended to neutralize the products of decomposed urine and in a general way to make the diaper more or less sterile. Mother's and nursemaids are sometimes careless about the baby's laundry and diaper rinses are intended to make carelessness a little safer than it is at present. It is claimed for these products that they prevent diaper rash.

A generally used preparation for the baby's scalp is an oil or pomade, which is used for the purpose of preventing scurf. Babies are prone to this condition, which is in effect a form of dandruff. Most mothers fear to massage the baby's head enough to clean it thoroughly in the period before the skull has grown together. The consequence is the formation of a slight but tenacious scale. The use of an antiseptic oil regularly after shampooing will prevent the condition. But a baby scalp oil can be added to the list. It is made as below.

Baby Scalp Oil.

Oil of stavesacre seed	30.0	%
Olive oil	70.	"

The product is simply mixed and filtered. It may be lightly perfumed. This preparation may be converted into an ointment by adding benzoinated lard and a suitable amount of white beeswax to give it proper body and spreading qualities. The stavesacre oil is said to prevent scabies, and scurf.

Shampoo soaps are made in the usual way with exceptional care being taken regarding purity of the oils and excessive alkalinity. On numerous occasions we have discussed the manufacture of liquid soaps and to these discussions the reader is referred. A thought in this connection is that since shampoo soap causes the baby acute discomfort when it gets into its eyes, the soapless shampoos made from sulfated fatty alcohols might offer a new opportunity.

The APMA Meeting

Voicing its approval of the Copeland Food, Drugs and Cosmetic Act, and unqualifiedly voicing its disapproval of the Federal tax measure, the American Pharmaceutical Manufacturers' Association closed a most active and successful annual meeting at The Homestead, Hot Springs, Va. Opening the meeting on Monday, June 8, George R. Flint, president of the association, after calling on delegates from other associations, and hearing the treasurer's and secretary's reports, delivered his presidential address. Excerpts from Mr. Flint's address:

"It is not enough for us to follow the progress being made in pharmacy and medicine. It is our duty, of course, to encourage and further such progress no matter what its source, but in the final analysis it is distinctly our job to create and thereby lead in the advancement of these sciences.

"And, gentlemen, more than that, it is our job to be of assistance in teaching the medical profession how to use these discoveries in the most effective way. It is an acknowledged fact that our great medical schools are not teaching materia medica as extensively as they formerly did. Only recently a professor of medicine in one of our important medical schools remarked to me that medical schools today are doing a good job of teaching medicine but, after all, they are teaching few medicines. It, therefore, appears as our responsibility, not only to create and produce medicinal agents, but to assist the physician in the technique of their use.

"Our method of procedure, then, seems well defined. First, we must discover and create; second, we must prove with the assistance of our great universities and hospitals; third, we must serve by presenting these new things to the profession by means of truthful advertising and personal contact through high class and educated representatives.

"It is unnecessary for me to remind you that in this connection we should pay special attention to the conditions under which these products are produced. Drugs, like foods, are for human consumption and must be produced in clean and sanitary laboratories. There is no place in present day manufacturing pharmacy for products manufactured in dirty, unsanitary plants. The manufacturer, if there be one, who does not pay proper

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Carroll Dunham Smith, Carroll Dunham Smith Pharmacal Company

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Secretary
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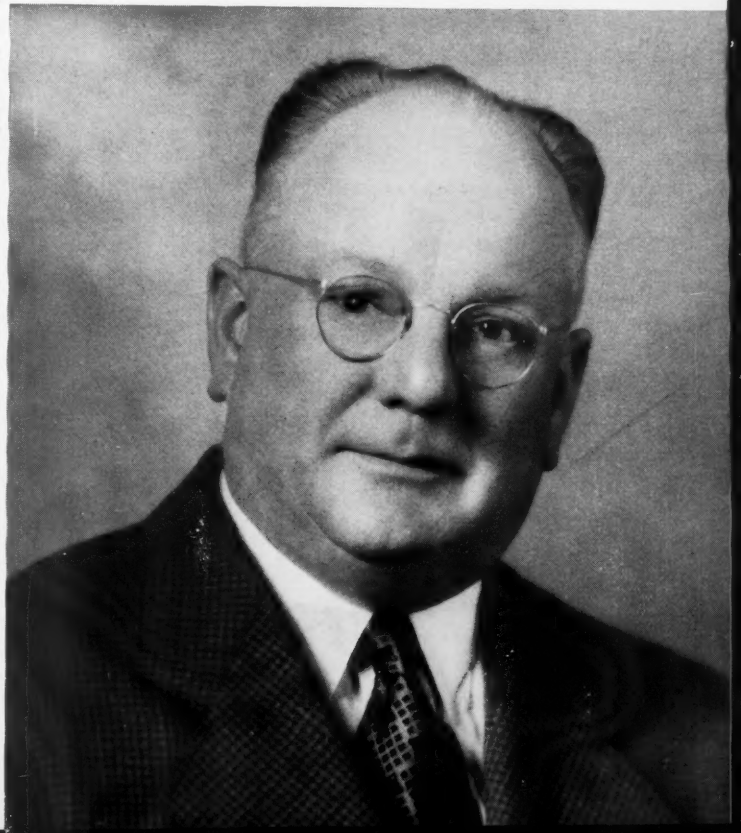
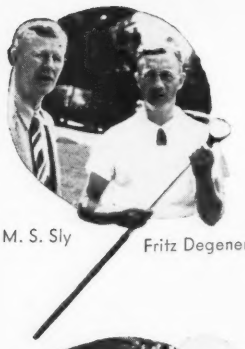
To Fill Vacancies on Board of Directors
Ralph A. Patch, E. L. Patch Company
C. F. Asher, George A. Breon & Company
S. Barksdale Penick, Jr., S. B. Penick & Company

GEORGE R. FLINT, RE-ELECTED PRESIDENT





M. S. Sly

Fritz Degener

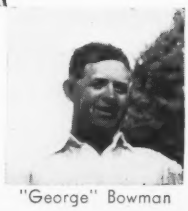
W. H. Rorer

S. W. Heartfield

M. Hoopes

Floyd Thayer

J. L. Dow



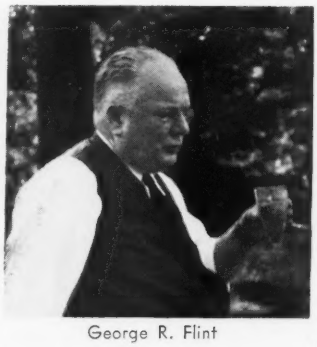
"George" Bowman

A. C. Boylston

G. L. Harvey

Paul Klemtner

C. W. Warner, R. A. Patch



George R. Flint

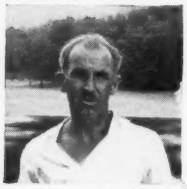
C. E. Jamieson, A. P. Conner

L. D. Humph B. L.

Phil Rising

Harold Cummings

R. P. Neptun



Harvey Harker

C. D. Smith, J. John

R. E. Dorland

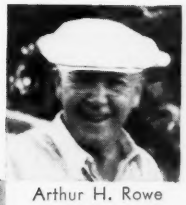
J. E. Bartlett

M. A. Frohock

S. W. Fraser

Ken Hewitt, Ed. Rhein

J. A. Huisking, R. K. Snow



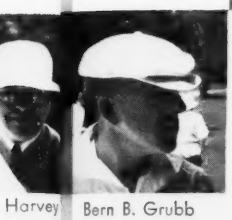
Arthur H. Rowe

Ralph Clark

Frank A. Mallett

C. N. Angst, A. P. Connor

George Ringel



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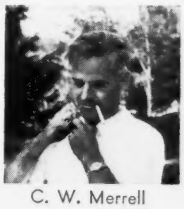


C. W. Merrell

Ben Zimmer

Walter Kuetzer

. Hump B. L. Maltbie

J. A. Huisking, Eric Leth

Charles Wesley Dunn

R. A. Patch, John Frosst

John G. Searle

Smith, J. John A. Silver

W. H. Mysch

V. E. Williams

Elmer Hessler

F. J. McDonough

J. G. Van Nortwick
J. L. Hopkins

H. K. Mulford

John W. Vance

Charles Predmore

E. T. Kirkland

attention to this important matter cannot hope to keep pace with the progress of our time.

"If I were asked by a student of pharmacy to define the steps necessary to the successful conduct of a pharmaceutical manufacturing business, I would answer thus:—

"First, research.

"Second, a clean, sanitary and well-equipped plant, manned by a capable personnel.

"Third, the manufacture of products ethical in character.

"Fourth, careful standardization of these products.

"Fifth, market by means of truthful advertising and truthful presentation.

"Sixth, membership and active service in your trade association.

"Without doubt, we must reconcile ourselves to the fact that we shall be compelled to operate under severe tax burdens, greater than we have ever experienced before. We will find business staggering under whatever revenue act is finally decided on, since it seems an assured fact that this bill will be designed to produce votes as well as dollars, with little or no regard for its effect on business. Social security legislation, noble in purpose but impractical because of hasty weak-thinking adoption, is ours to make what we can of it. Other proposed laws with which you are familiar, but too numerous to mention, must undoubtedly be complied with.

"The bacteria of lawmaking is in the air, being incubated not only in Washington but in all of the forty-eight States, and we can expect a flood of nuisance legislation—as example, the Ohio use tax law—from most of them. It is impossible for our New York office to cope with these State matters and, as I see it, it is a problem that can only be handled by the resident members in their respective states. Undoubtedly better organized effort by our members as State groups is indicated.

"While I cannot paint other than a gloomy picture so far as legislation is concerned, I do recommend that we keep our balance and continue to deal with these legislative matters as we are now doing; to be particularly interested in attempting to eliminate from these bills unsound principles; by endeavoring to replace them with constructive suggestions and amendments. Since we cannot possibly hope to prevent the introduction of these bills, we must continue to constantly support the sound and constructive features and increase our opposition to the unsound principles.

"Statements inferring that business is a green-eyed monster and that business men are selfish to the last end of point, designed to confuse the sound thinking of men, will fall of their own weight and be buried, under an avalanche of accomplishment, service and good deed emanating from both employer and employee, the combination which, after all, goes to make up this thing called business. I predict that we will emerge from these trying times the stronger for having experienced them."

Charles Wesley Dunn, Counsel of the Association, spoke at the Wednesday morning session on proposed legislation. He said he feared that the Copeland Food, Drugs and Cosmetic Act would not pass because of the serious controversy concerning several differences in the bill as it passed the Senate and as it was reported to the House. The main difference, said Mr. Dunn, was the one by which the House measure sought to give advertising control to the Federal Trade Commission rather than to the Department of Agriculture as provided in the bill as it passed the Senate. Mr. Dunn criticized this change pointing out that a case which he carried to the Supreme Court this year involving price maintenance had been carried on for seven years before the final decision was reached. Such delay in advertising control would defeat the purpose of the provisions for controlling advertising, he said.

The grading of foods as provided in the House bill was also a serious point of controversy, he said. Furthermore, the variation clause which was satisfactory in the Senate bill was not satisfactory in the House bill. Mr. Dunn told of the need for a satisfactory variation clause which would permit manufacturers to meet the needs of physicians for products which differ from the official standards. Elimination in the House measure of the provisions which empowered any district court to enjoin any administrative regulation which is unreasonable, abitrary, or capricious, was pointed out by Mr. Dunn who said that the vast amount of administrative power conferred in the new law made such a provision essential.

Surprise was expressed by Mr. Dunn that drug manufacturers had not taken a more active interest in the Robinson-Patman Price Discrimination Bill. Although he expressed approval of the principles of the bill, Mr. Dunn expressed disapproval of the provisions by which the Federal Trade Commission was granted power to set quantity limits and by which the rule of evidence was reversed causing a manufacturer to prove that his prices are not in violation of the act, rather than making the government prove its case. The provision by which the buyer is equally guilty with the seller in price discriminations in violation of the act was an excellent provision in Mr. Dunn's opinion, since it will stop large retail organizations from attempting to coerce manufacturers into violations of the act.

Other legislation was discussed briefly by Mr. Dunn including the Tydings Enabling Act, which he said had no chance of passage. Mr. Dunn reiterated his opinion that the State Fair Trade Acts were unconstitutional insofar as they attempt to bind non-signers of contracts. He stated that the decision in the case of the Guffey Act forecast a decision that would invalidate this provision in the State Fair Trade Acts. Under the Guffey Act a majority of the producers of coal fixed maximum hours and minimum wages which then became binding on all members of the industry whether or not they agreed to the terms. The Supreme Court stated that this was the worst kind of power in that

(Continued on page 93)

SINGLE DOSE PACKAGES

Back in February 1935, we were first to advocate the development of a medicinal "nip" or single dose package in this industry. In March, April, May and December issues of that year we continued to hammer on the need and opportunities existing for single-dose packages in this field, and to predict that a popular vogue for them was in the offing. We indicated that a very natural field for such packages existed in many medicinals, particularly those of the effervescent salt type, and last month we reported that one of the largest manufacturers of hair tonic was planning to bring out a single-dose package.

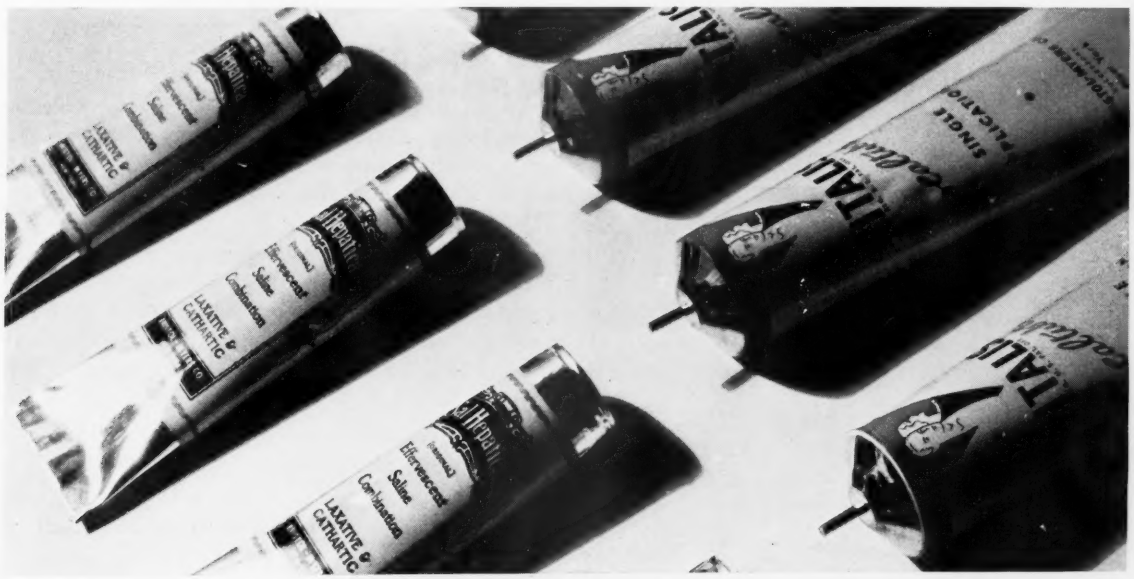
By this time, most of you probably know that Sal Hepatica is now being packaged in single-dose tin containers made by Sun Tube and called by that company, "unitainers." But you may not know that Vitalis will soon be presented in similar one-application containers, and that at least three more popular, volume products are also preparing to announce single-dose packages. For the present, at least, Bristol-Myers is planning to use the Sal Hepatica in "unitainers" just for sampling and detailing, but it is reported that the next step may well be consumer sale in this package.

The development of this type of package has had to cover the entire manufacturing cycle. It started out with chemical tests of metals, testing them with various products to determine the possibility of corrosion by them or their constituents. Then semi-automatic machinery was designed for producing the containers at high speed and low cost. A filling and closing device, combining a collapsible tube closing machine with a vibrating chute measuring and filling head, was designed and built for powdered and crystalline materials. This head has no plungers, augurs or measuring cups, is adjustable in operation by means of a standard electrical control with a radio dial adjustment. The liquid filling machine is equally simple.

The next problem was to get someone to use the container. Despite the fact that it was, according to Sun Tube Co., patented over 90 years ago, very little use had been made of it. In one case, not a drug product, the product had been packed in waxene envelopes, three in a hinged, lithographed tin box with adhesive tape binding to hold the vacuum, as the box was vacuum-packed. The initial cost was high and returns due to spoilage on account of moisture absorption were around 30%. Something like 25,000,000 "unitainers" containing this product have been retailed with no returns for that reason.

In another case, a manufacturer of an effervescent product had experimented for some five years with

(Continued on page 72)



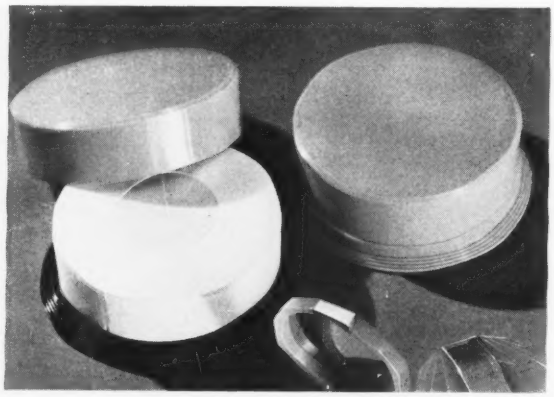
PACKAGING NOTES

Plastic Powder Box

Norton has designed and is now introducing some new plastic powder boxes which are designed to give the maximum in quality and appearance at the lowest possible cost. The inexpensive paper drum forms the inner side wall, where in most previous molded powder boxes, there has been two telescoping plastic surfaces. Therefore, although the box gives the appearance of a completely molded package, there has been a great reduction in the amount of plastic material needed.

While accomplishing this economy, the company has, at the same time, complied with the requirements of most standard powder filling equipment by making the box with an open bottom, which is a tremendous advantage from this point of view. Another convenience from the production point of view is the fact that the paper drum may be readily attached or detached.

The plastic cover fits snugly on the paper drum and the entire package is an attractive, compact, workmanlike unit. It is a stock box but those who want exclusive designs may secure them by paying nominal tool charges. And, of course, a wide range of colors is available. The company will be glad to send you a sample for closer inspection. Address them at Lockport, N. Y.



"Hy-Siltone"

Sylvania has discovered a new trick for making unusual wrappings and ribbons out of Sylphrap. The new product is called "Hy-Siltone" and it is made by applying silver plating to Sylphrap. When a plain, colorless sheet is used, a very unusual effect is obtained, but when it is applied to a colored sheet, a very attractive and colorful, two-tone effect is given. And the combined sheet and plating has even more lustre, tensile strength and pliability than Sylphrap alone.

This new wrapping product, whether in sheet or fancy ribbon form, should be of particular interest to manufacturers in this field. No description is adequate so write for samples so that you may see it. Simply address the company at 122 East 42 st., New York.

The company also announces that it has been granted U. S. Patent No. 2,043,860 covering Rancidity Retarding Old Gold Sylphrap.

The Package as Merchandiser

W. C. Ritchie has just published a very valuable booklet on packaging. This booklet is of interest because it not only presents the facilities of the Ritchie organization but also makes clear the principles of packaging and package design.

The booklet answers such questions as these: What makes a good package? What is meant by "modern packaging?" What is the relation of packaging to advertising, selling and store-promotion? What is its bearing on manufacturer, dealer and consumer? Why re-design?

It is a thorough presentation of the package as a merchandising medium and should be of interest to anyone concerned with point-of-sale merchandising. Copies may be obtained by dropping a line to the company in Chicago.

PROFITS IN REAL MARKETING

By Frank R. Coutant*

Over the country today there is demand for lower prices such as I have never heard in the years that I have been studying all phases of marketing. Its effect has been shown in several waves of expression.

There was one wave in which the stores were flooded with cheap bad merchandise.

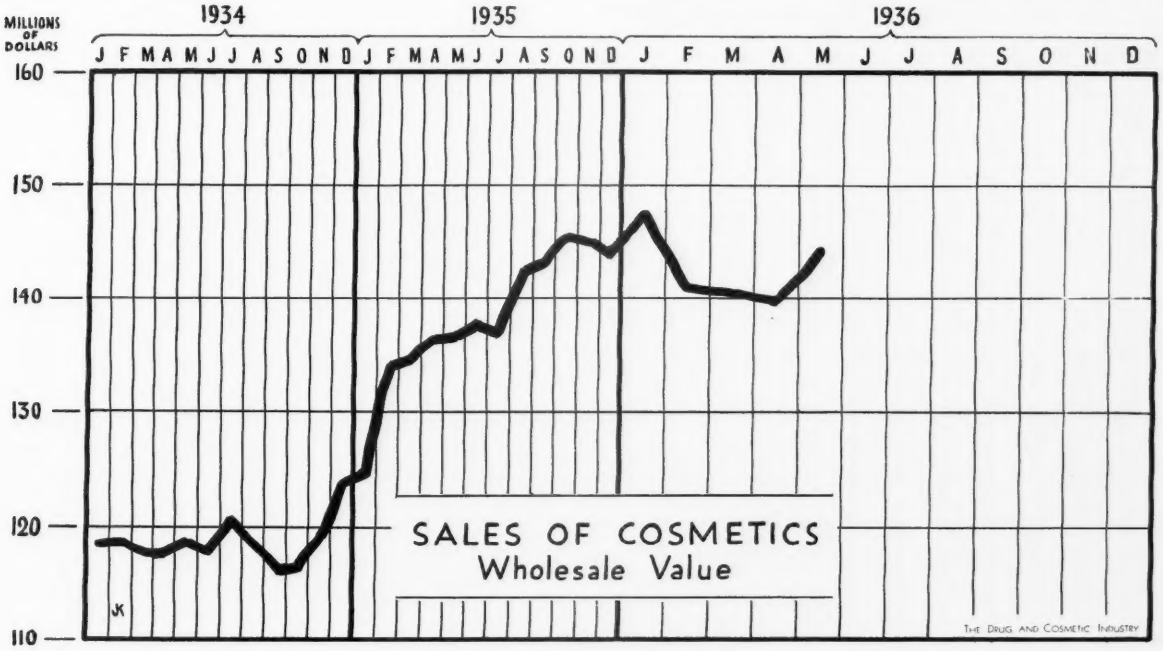
Buyers informed manufacturers (correctly) that consumers simply must have lower prices or they could not buy. A comparison of the 1928 industrial payroll total with that of 1936 will tell you why statistically—but you know it, of course, from common observation. Soon manufacturers were finding that the competition of these cheap goods was ruining the sale of standard grade merchandise. I asked several complaining manufacturers who made these shoddy lines. "Oh," they answered, "almost everybody is turning them out. We make some, because we want our share of whatever the public is buying."

In a few months, the public decided that cheap bad goods were not the right answer to their needs. Smart marketers sensed the trend long before the public en masse refused to buy bad goods—and got out if they were ever foolish enough to stoop to making such wares.

Certain stout-hearted producers said "Consumers will always come back to quality goods." Courageously they refused to lower their standards. Matters worked out a little differently than they expected.

On the next wave, when the public did begin swinging back to better quality, these courageous manufacturers caught some of the trade revival. But volume was less than they had hoped. The reason is obvious enough—the purchasing power of the larger proportion of con-

*President, American Marketing Society; Director of Research, Pedlar & Ryan.



The wholesale value of sales for the twelve month period ended May 1936 took a sudden rise, having been equal to $144,017,000. This represents an increase of 3 per cent over the $139,763,000 for the year ended April 1936 and is 5.4 per cent greater than the $136,583,000 for the twelve month period ended May 1935.

sumers is still far below the level where they can pay for quality merchandise at the prices manufacturers and merchants would like to get. When they buy on time, collection is a serious problem. Wages and salaries are too low to support high prices.

The third wave, in which we are now struggling, is the most widespread flood of price cutting and premium offers in the history of modern marketing.

In many lines retailers are selling below cost, while manufacturers express indifference as to what happens after they get their price. Seemingly these manufacturers figure that if the public cannot pay the margin of profit retailers must have in order to live, more efficient retailers will take their places. So what? Smart independent retailers are organizing, and making their influence felt in private brands and in legislation aimed at financial favors manufacturers give to chain stores, and big price-cutting outlets. Smart manufacturers have sensed the *public necessity* for lower prices that underlies this price-cutting wave.

How are these lower prices to be achieved while still maintaining profits? The answer lies in better marketing methods. As I have already outlined these methods in a previous article in this publication, I shall simply refer to them briefly here.

Let die this struggle for greater volume of sales regardless of its price. Analyze your market, to see what happens to your product from the time it leaves the source to its final use. Analyze your sales records and costs to see where you are selling at a profit, and where you had better leave it to the other fellow. Identify your final consumer.

Explore the possibilities of your product. Dozens of specific instances could be given of new uses discovered for old products, of minor changes that proved to be of major importance, and of package designing by test methods.

Test your sales and advertising policies. You know what your good friends and some of your bad friends say about your policies. But you'll never know how many indifferent ones might be won over as good friends until you start taking regular audits of trade and consumer attitudes.

To summarize the old and new ideas I have presented, these are my personal convictions: 1st: That lower prices for many manufactured products will bring them within the reach of more people who would gladly buy if they could, employing more workers in manufacture and thereby increasing our national purchasing power. 2nd: That cuts in prices are desirable only when they pay a profit to manufacturers and sellers of goods. 3rd: That savings made where inefficient selling exists will help materially toward lower prices and ultimate profits. 4th: That science in marketing has been sadly neglected in comparison with the use of science in production. 5th: That the ½ of 1% of manufacturers who now use modern scientific methods of marketing are not only social assets to the country, but are earning reasonable profits through their efficiency.

Single Dose Packages

(*Continued from page 69*)

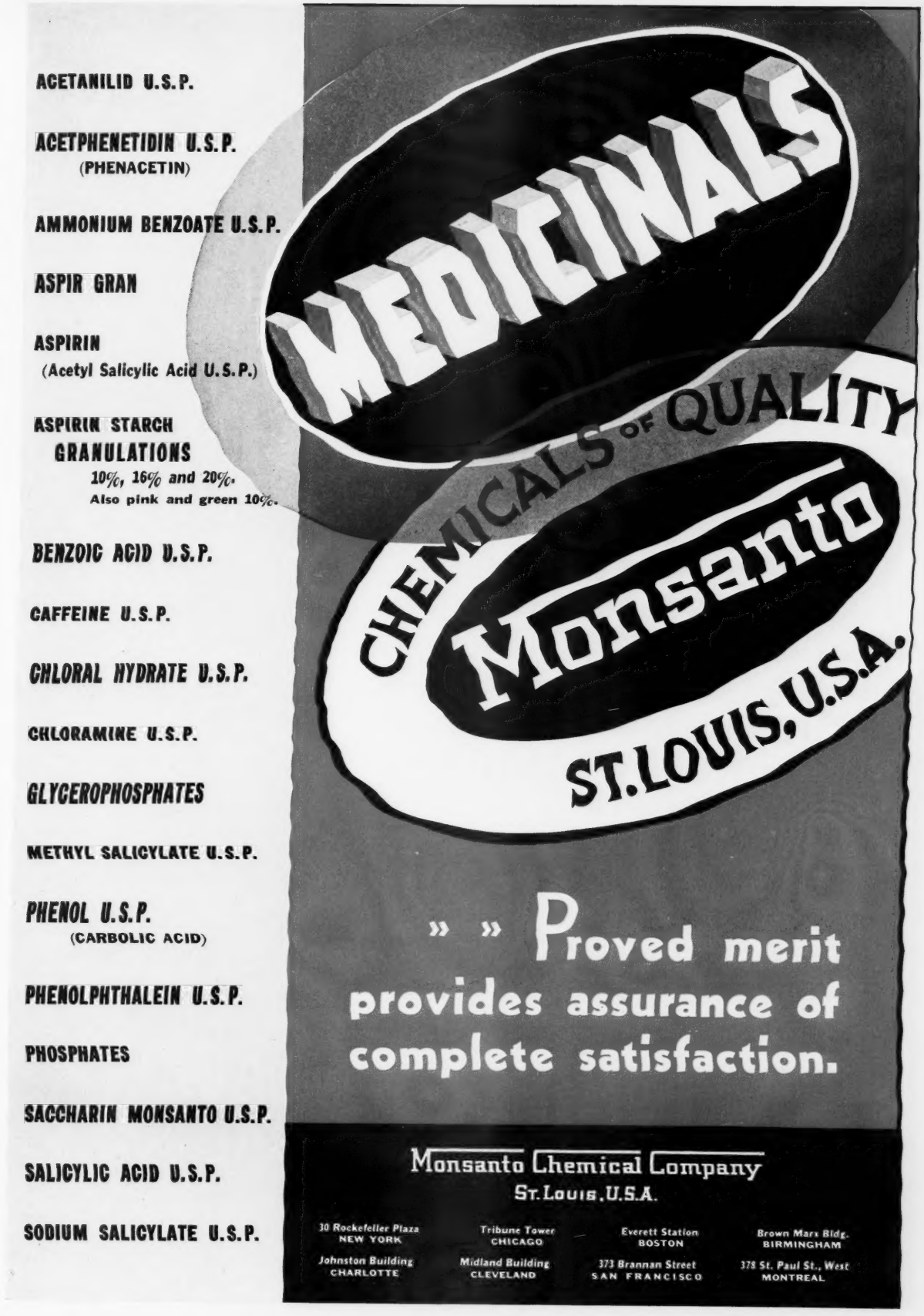
various types of one-dose packages, without finding one that would preserve the product from moisture. He has had "unitainers" on test for a year, running the tests with the large package as a control. Absorption of moisture by the product in "unitainers" has been substantially less than in any other type of container tested and loss of CO_2 has been negligible. As soon as a filling machine can be delivered, that product will be on the market.

In the case of Vitalis, the single-application container, factory-filled and sealed, was adopted to combat substitution and pirating of the product. To hold the volatile liquid, a new type of folded end closure was devised. The container has a pin, formed as a part of the metal of the body, which, when bent back and forth, breaks out a hole in the end. The size of the hole is such that the "unitainer" must be squeezed and flattened to expel the contents. By making a hole in the container and distorting it, refilling is rendered impossible. This has a collateral advantage to the customer, as he gets the genuine product, not something shaken up in the back room of the barber shop.

This anti-substitution idea is reported to be taking hold with other manufacturers with counterfeiting problems. While the package cost of a quart of liquid, in "unitainers" is higher than that of a squirt bottle, protection against counterfeiting seems to be worth the difference. In the case of certain effervescent products, dispensed at soda fountains, substitution is a problem met by these containers. Some states prohibit the dispensing of products containing acetanilid and similar drugs except in factory-filled, original packages. These containers meet this requirement and can be used for dispensing such items at fountains.

These single-dose tin containers may be made perfectly plain, for ethical products or for vaginal suppositories, where no identification is desired on the package. They may be embossed on the flat end or on the side. They may be decorated as collapsible tubes are decorated. They are seamless, homogeneous and are sealed hermetically by folding and crimping the end. They may be opened without any device other than the thumb nail, although any pointed instrument will serve. Special opening devices (like the Vitalis) may be provided. They are as disposable as a gum wrapper or a burnt match and there is no hazard of cut fingers in handling waste containing them. They are convenient to carry on the person and in a handbag, as there is no danger of breakage.

In other words, the single-dose package has arrived. We feel certain that a ready consumer acceptance awaits it in the products of this industry. It will be interesting to see how the various manufacturers merchandise the single-dose package and what effect they will have upon merchandising policies and trends in this field.


ACETANILID U.S.P.
ACETPHENETIDIN U.S.P.
(PHENACETIN)
AMMONIUM BENZOATE U.S.P.
ASPIR GRAN
ASPIRIN
(Acetyl Salicylic Acid U.S.P.)
ASPIRIN STARCH
GRANULATIONS
10%, 16% and 20%.
Also pink and green 10%.
BENZOIC ACID U.S.P.
CAFFEINE U.S.P.
CHLORAL HYDRATE U.S.P.
CHLORAMINE U.S.P.
GLYCEROPHOSPHATES
METHYL SALICYLATE U.S.P.
PHENOL U.S.P.
(CARBOLIC ACID)
PHENOLPHTHALEIN U.S.P.
PHOSPHATES
SACCHARIN MONSANTO U.S.P.
SALICYLIC ACID U.S.P.
SODIUM SALICYLATE U.S.P.
MEDICINALS
CHEMICALS OF QUALITY
Monsanto
ST. LOUIS, U.S.A.
» » Proved merit provides assurance of complete satisfaction.
Monsanto Chemical Company
ST. LOUIS, U.S.A.
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Tribune Tower CHICAGO
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Brown Marx Bldg. BIRMINGHAM
Johnston Building CHARLOTTE
Midland Building CLEVELAND
373 Brannan Street SAN FRANCISCO
378 St. Paul St., West MONTREAL

SMOOTH SAILING AHEAD
• • • BUT FOR HOW LONG
Baker's fine chemicals
HAVE YOU MODERNIZED YOUR PRODUCTS LATELY?
Baker's fine chemicals
DISCOVERY IS THE REWARD OF AN OPEN MIND
Baker's fine chemicals

Thank You...

Pharmaceutical You Read··You Listened·

...AND YOU BOUGHT!

JUST A YEAR AGO, Baker started an intensive sales drive to direct more pharmaceutical manufacturers to the merits of Baker's Fine Chemicals. The chart to the right pictures our progress.

To those manufacturers who read, listened, tested and bought, we say "Thank you." We appreciate your business and pledge our laboratory skill and increased manufacturing facilities to give you even more in quality and service for your 1936-1937 Fine Chemical dollar.

To those manufacturers who have yet to discover the uniformity and quality of Baker's Fine Chemicals, may we say again the name Baker for over 30 years has been synonymous with chemical purity. Just as Baker's Analyzed Reagents mean exactness to the decimal for the research chemist, so Baker's Fine Chemicals mean measured purity to the pharmaceutical manufacturer.

BAKER'S FINE CHEMICALS FOR

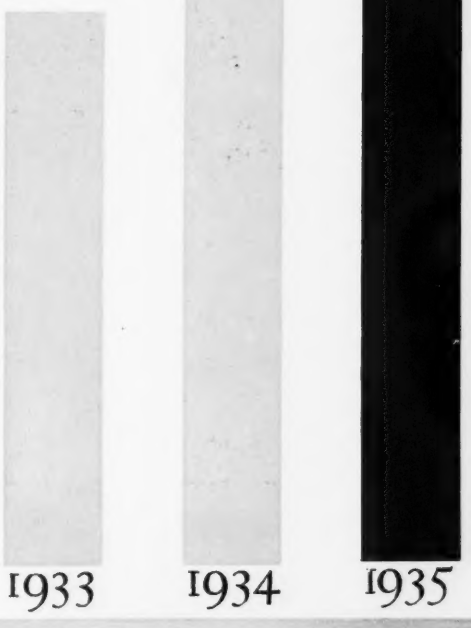
Manufacturers: ·You Tested··

You, too, will find Baker a good name to know, to remember, for it is one that is on the books of the foremost pharmaceutical manufacturers in the United States. Give Baker an opportunity to serve you on one Fine Chemical item. If history repeats itself, other business will follow.

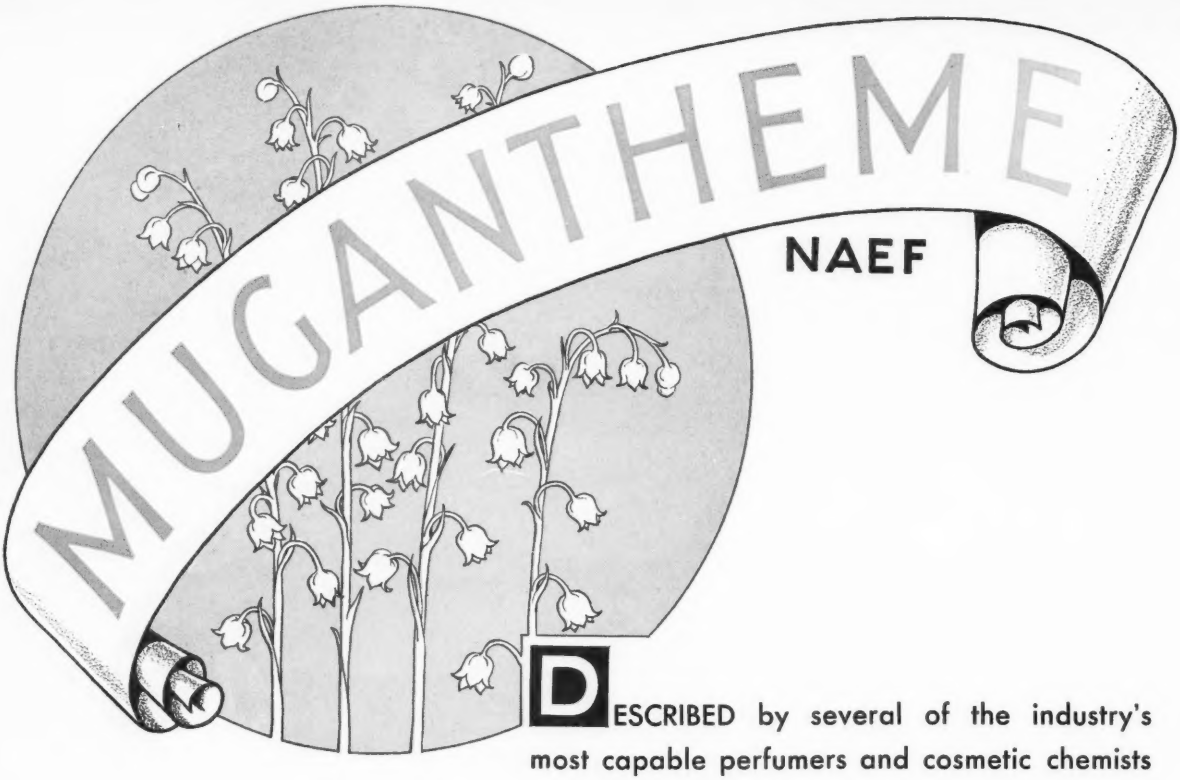
Ralph Clark

J. T. BAKER CHEMICAL CO.
Phillipsburg, New Jersey

NEW YORK 420 Lexington Avenue • PHILADELPHIA 220 South 16th Street • CHICAGO 624 South Michigan Blvd.



PHARMACEUTICAL MANUFACTURERS



DESCRIBED by several of the industry's most capable perfumers and cosmetic chemists as "the best Lily of the Valley odor yet", MUGANTHEME Naef is a new and especially delightful version of a Muguet base.

MUGANTHEME is truly the universal Lily---for it can be used with most pleasing effects and equally good results in perfume extracts, creams, powders and lotions.

THE current popularity of floral type odors marks the introduction of MUGANTHEME by M. Naef & Co. now as particularly timely.

$17.50 per pound
A Trial Sample on Request

FIRMENICH & CO., INC.
135 FIFTH AVENUE - NEW YORK

MERCHANDISING NEWS

Cosmetic Style Trends from Toilet Requisites

Forecasts for fall show that Autumn leaves and nature's brilliant display of autumn colors will set the color styles. While black is the background, it is woven across with brilliant threads of color. A shade of brown which the French call Chaudron promises to lead for accessories. Fashion goes vegetarian with Aubergine (French for eggplant), a deep, soft purply tone, which is another Fall prophesy. Araby green, marron brown and Oriental oxblood are new artificial shades, Paddock tan, cinnamon brown, Spanish tan, all have the Autumnal cast.

All of these shades should prove significant to cosmetic manufacturers, both in creating new cosmetic shades as well as new packages and wrappings.

In the formal and artificial colors Schiaparelli features a greyed-blue; a dusty-pink, black with pink will be smarter than black with white; crushed raspberry, acid yellow and helio mauve would be excellent colors for new powder boxes, sachets and eyeshadow, rouge and lipstick cases, and compacts.

Although there have been many additions to cosmetic shades, packages still remain rather conservative. Why not try some of the attractive new fall shades which lend themselves so well to the cosmetic picture?

The renewed interest in bicycling, for various reasons such as perhaps a trim figure, shapely, limbs, or maybe just sport, has brought to the mind of at least one manufacturer the idea of a Bicycle Beauty Kit. It does away with any inconvenience that might be experienced by the cyclist by trying to hang on to her vanity case or whatever it might be that she carries in the way of cosmetics and which she surely wouldn't be without. It is a compact kit made of natural color pigskin, and is just the right size to strap neatly back of the bicycle seat. It contains a compact, lipstick, comb, large mirror, change purse, and even room for a handkerchief, keys and various other odds and ends.

This is certainly a smart idea and ought to bring to mind similar conveniences for other sports.

Eau de Colognes have certainly come into their own this summer. The old established eau de colognes are being well displayed and featured, and any number of new ones have made their bow this season. Cooling, soothing trade-names have helped sell some of the newer colognes. Another new product promises to act not only as an eau de cologne but is said to embody a sunburn preventive base which filters the burning rays of the sun. The bottle is large, attractive, and extremely inviting. Another manufacturer created an interesting package by placing the bottle containing the eau de cologne in a transparent carton giving an "ice-cube" effect.

From the number of new nail polish shades recently placed on the market, it doesn't seem as if the manufacturers could possibly think of another shade, but on they come with more and more attractive colors to match every gown, every mood, every season or time of day that milady could possibly think of. The fascinating part of it is that no longer does the old "light-medium, or dark" appear on the bottles. Now there is "Flower Pot Red," and "Old Copper Kettle". A clever departure and one that sells goods.

Tooth Paste Opportunity

As you know, the use of sodium perborate in dentifrices has thus far been confined to powders because sodium perborate cannot ordinarily be made stable in tooth pastes. It is obviously a "natural" for a tooth paste and a sodium perborate tooth paste would have exceptional merchandising possibilities.

A preparation is now available which is said to contain from 10 to 30 per cent. of stabilized sodium perborate in a tooth paste. Its strength is reported to have been retained over a period of eight months yet the paste immediately releases oxygen on contact with saliva.

The patent on this has been applied for and the inventor is interested in selling or licensing his rights. We shall be glad to pass along to the inventor any communications from interested manufacturers who would like to investigate further the possibilities of this product.

METAL GOODS

SOURCE OF SUPPLY

★ What do you demand of a source of supply for your vanity cases . . . lipstick and eyebrow-pencil containers . . . rouge boxes . . . jar and bottle closures . . . similar products?

If your purchases include metal parts or products in quantity . . . if your standards are *exacting* . . . you'll probably find that Scovill can serve you efficiently and understandingly. For here are designing facilities abreast of the times, ready to aid you with suggestions on styling and finishes. Our research facilities are at your disposal in the solution of unusual problems. Our production capacity is equal to the largest orders.

Generally, Scovill's facilities have been utilized for the production of made-to-order material designed and produced to fit one customer's line. But by adapting or changing standard parts, many cosmetic houses buying in smaller quantities have also found in Scovill a source of supply exactly meeting requirements.

A representative from any Scovill office (in Canada, a representative from our Toronto plant) will be glad to work with you on your metal container or closure and metal part needs.

SCOVILL

S C O V I L L

SCOVILL MANUFACTURING COMPANY

69 MILL STREET WATERBURY, CONNECTICUT

Boston • Providence • New York • Philadelphia • Atlanta • Syracuse • Pittsburgh • Detroit
Chicago • Cincinnati • San Francisco • Los Angeles • IN CANADA: 334 King St., E., Toronto, Ont.

Brand Preferences

The Fawcett Magazines report the following brand preferences as the result of a reader survey which included 16,808 returns.

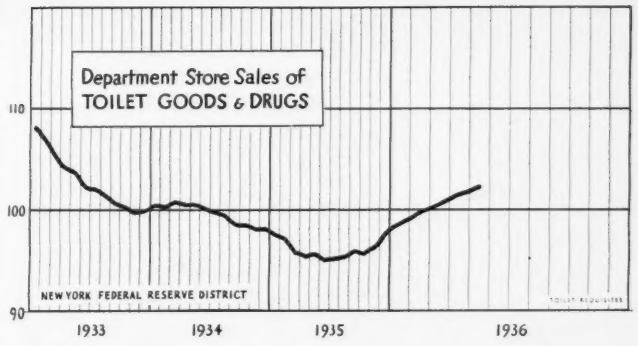
All-purpose cream, Lady Esther, 60.4 per cent., Ponds, 10.8 per cent., lotions, Hinds, 14.7 per cent., Jergens, 13.2 per cent., Campanas, 10.6 per cent., Baby powder, Johnson & Johnson, 75.4 per cent., Acne cream, Noxzema, 21.6 per cent., Blackhead remedy, Noxzema, 19.6 per cent., Bath salts, Yardley, 16 per cent., Cleansing cream, Ponds, 35.2 per cent., Woodbury, 14.4 per cent., Lady Esther, 10.5 per cent., Deodorant, Quest, 20.9 per cent., Amolin, 16.9 per cent., Deodorant, Odorono, 56.8 per cent., Dipilatory, Zip, 36.3 per cent., Neet, 29 per cent., Face powder, Lady Esther, 18.9 per cent., Coty, 9.8 per cent., Woodbury's 9.2 per cent., Hand cream, Hinds 25.8 per cent., Pacquin's 17.3 per cent.; Campana's Italian Balm 13.5 per cent., Hand lotion, Jergen's 27.4 per cent., Campana's Italian Balm 24.6 per cent., Hinds, 17.7 per cent., Lipstick, Tattoo, 19.7 per cent., Tangee, 12.9 per cent., Mascara, Maybelline 58.4 per cent., Nail polish, Cutex, 65.5 per cent., Perfume, Coty 32.9 per cent., Evening in Paris, 15.1 per cent., Powder base, Pond's 19.8 per cent., Woodbury's 12.5 per cent.; Rouge, Max Factor 11.8 per cent; Tangee, 10.2 per cent., Sunburn remedy, Unguentine, 33.7 per cent., Noxzema, 26.7 per cent., Talcum powder, April Showers, 11.2 per cent., Mavis 9.2 per cent., Tooth paste, Colgate's 20.3 per cent., Ipana, 20.1 per cent.; Tooth powder, Dr. Lyons 58.7 per cent.

Brand preferences in drug products were: Aspirin, Bayer, 88.0 per cent; Antispetics, Lysol 29.0 per cent., Listerine, 17.9 per cent., Pepsodent, 13.9 per cent., Cold remedies (drops and syrups) Vicks 75.0 per cent., (salves) Vicks, 82.2 per cent., (tablets) Bromo Quinine, 38.0 per cent., Indigestion remedies, Alka-Seltzer, 15.3 per cent., Baking Soda, 11.6 per cent., Bi So Dol, 11.4 per cent., Laxatives, (liquid), Milk of Magnesia (No Brand) 16.3 per cent., Phillips, 11.8 per cent., (salts) Epsom 60.4 per cent., (tablets) Ex-Lax, 57.5 per cent., Liniment Sloan's 65.8 per cent., Mouth wash Listerine 60.1 per cent., Feminine hygiene, Lysol 46.9 per cent.

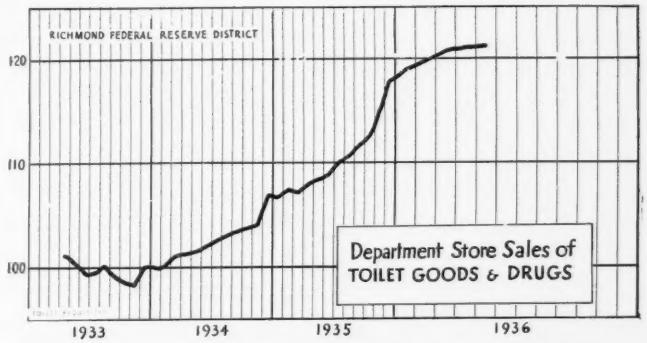
Wanted—Small Going Company

We know a man with money who wants "to buy outright a small going company in this field. The company must have *some* business but more important is an organization, no matter how small. The idea is to tie up with chain store business, which we already have on hand. Will pay cash for stock on hand and something for 'good will,' if any."

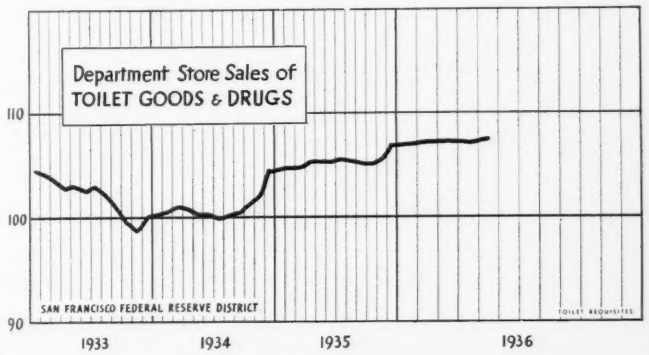
This looks good for somebody who has some start in the syndicate field and wants to sell out. We shall be glad to forward your communications to this person.



May sales of drugs and toilet preparations by department stores in the New York Federal Reserve District were 8.6 per cent. higher than in May 1935. The adjusted index stood at 102.3, the highest point reached since May 1933, and compares with 101.6 for April 1936 and 95.6 for May 1935.



Sales of drugs and toilet preparations by department stores in the Richmond Federal Reserve District were 2.8 per cent. higher in May 1936 than in the same month of the previous year. On the same basis, sales in the city of Washington increased by 3.7 per cent. and in Baltimore by 1.8 per cent. The adjusted index number of retail sales of drugs and toilet preparations for this district was equal to 121.3 for May 1936 compared with 121.1 in the previous month and 108.6 for May 1935.



Sales of drugs and cosmetics in the San Francisco Federal Reserve District increased in May, the index registering 107.4. This adjusted figure compares with 107.1 in the previous month and 105.3 for May 1935. Actual sales for the whole district were 3.2 per cent ahead of those for the same month of the previous year. This figure is an average resulting from a decrease of 0.6 per cent in Los Angeles and increases of 12.7 and 15.5 per cent in San Francisco and in the Pacific Northwest, respectively.

Caps with Distinction

THESE bottle caps are some of those we have made for manufacturers who wanted a distinctive closure—something more than the ordinary stock bottle cap.

Perhaps you, too, are looking for a cap which is above the ordinary. This can be made following your own design or we shall be glad to submit suggested designs to you.

Fabricated of beautiful metal, polished or with enamel decoration.

We make a complete line of stock metal jar and bottle caps, too, but caps such as these are custom-built for discriminating manufacturers.

They lift your package above the crowd.

The BRIDGEPORT METAL GOODS MFG. CO.

BRIDGEPORT 'PHONE: BRIDGEPORT 3-3125 CONNECTICUT

EST. 1909

VANITY CASES • ROUGE CASES • PASTE ROUGE CONTAINERS • LIPSTICK HOLDERS (ALL TYPES) • POWDER BOX COVERS • EYEBROW PENCIL HOLDERS • BOTTLE CAPS • JAR CAPS • METAL NOVELTIES TO ORDER

Baby Products

Two years ago we were advocating further development of the baby product market based upon a therapeutic-cosmetic approach. Several of the larger manufacturers have seen the possibilities of this market and introduced baby oils as companion items to baby powders. But what is probably the first "exclusive" line for babies has been introduced by Ann of London and is now being introduced through the baby departments and toilet goods departments of the better department stores. The key item of this line is a cream for baby designed to protect the baby's skin against urine and diaper irritation, prickly heat, chapping, etc. Companion items are a baby soap and a baby powder.

The Robinson-Patman Bill

(Continued from page 39)

clearly understood that it would. The fact is that nowhere in the bill is the statement made that different discounts are permissible for wholesalers or retailers although the bill specifically states that the manufacturer has the right to choose his own customers. Most legal advisers, however, believe that the bill gives the right to name different prices and discounts for wholesalers either in the fact that it does not specifically prohibit them, or in the fact that it permits payment for services that are actually performed. Surely nobody but a wholesaler can actually perform the services of a wholesaler and therefore a manufacturer could offer the opportunity to perform these services to every customer without disturbing his wholesale business.

The basic method in which the Robinson-Patman Bill extends the price discrimination prohibitions of Section 2 of the Clayton Act is the provisions of the Clayton Act before passage of the Robinson-Patman Bill merely prohibited price discrimination that tended to create a monopoly. Now price discrimination is not only prevented if it tends to create a monopoly, but also if it injures, destroys, or prevents competition. Therefore, price discrimination becomes illegal in practically all instances.

So far as large manufacturers of raw materials are concerned, they have for the most part established quantity prices which are fixed for three months periods. These prices sometimes varying according to the industry to which the raw materials are sold, but different schedules of prices for different industries could not be interpreted as tends to injure, destroy, or prevent competition. The main effect of the bill, therefore, will be in the case of goods which moves through distributive channels and are sold to the public at retail.

It is natural that if the Federal Trade Commission fixes the quantity limits at high figures, not quite so much study of the markets for the various products will be necessary as if they attempt to set them low. However, at whatever levels the Commission attempts to place its quantity limits, there will be protests from one side or the other. Large distributors will fight to keep the quantity limits at the levels at which they have been buying, and the smaller retailers will insist that this provision in the bill was placed there to cut these quantity limits and give them a chance to compete.

The difficulty with the bill is that it is going to upset the plans of manufacturers—which plans in numerous instances take into account the direct support which certain retailers give them in very competitive areas. We know of one chain store system which always offers a certain manufacturer's goods before it offers its own private brands. Also the private brands of this chain, in sharply competitive areas, are priced at almost the same levels as the goods of this manufacturer. This is due to the fact that the manufacturer's goods are generally sold at lower levels in these areas, but the private brands could be lowered in price also. There does not seem to be any way in which this sort of support can be paid for under the Robinson-Patman Bill, since such cooperation would merely be a promise with the large majority of retailers with nothing to back it up. Furthermore, the independent retailers would maintain that the chain store had to offer a reputable line of goods to its customers in order to create in the minds of its customers an air of confidence that the chain handled only the best drugs.

Services for which manufacturers allow discounts can still be bought with discounts, but all retailers will have to be allowed to give these services and thereby obtain the additional discounts. There can be no more special arrangements with large chains by which the chains will display only a certain brand of one type of goods on its counters.

Just what a proportionate basis means with references to the buying of services, is not clear. In the case of window displays, cooperative advertising, or demonstrators, it is difficult to see how these things can be split up so even the smallest retailer would get some part of a demonstrator or some small portion for cooperative advertising or window displays. This part of the bill will need a ruling by the Federal Trade Commission before manufacturers can intelligently proceed. The question of P. M.'s is somewhat different. Since these are payments to the men behind the counter for individual sales, they must be the same for all stores whether large or small.

Some question arises as to whether or not a large chain store could buy a very large shipment from a manufacturer in his own state, have the goods all shipped to his own place for reshipment to his branches by himself, and thus avoid the provisions of the bill because the commerce was not interstate. If this is so then the State Fair Trade Acts by which the manufacturers localize in various states would tend to defeat the purposes of the Robinson-Patman Bill. Doubtless the Federal Trade Commission would crack down on such a deal on the basis that the goods eventually went into interestate commerce. But a question of constitutionality would be involved that could only be answered by the U. S. Supreme Court.

NEW!

Plastic Powder Boxes, Hinged Rouge Boxes

Here's the news you've been waiting for. Molded plastic *powder boxes—sleek, appealing and colorful—at prices* competitive with the better paper boxes!

Unusual construction makes it possible. Standard paper *drums fit tightly into a molded base-ring—without cement.* Filling and sealing bottom done in usual way. Cover slips snugly over top of drum.

Any color in the rainbow, with trade-mark or design engraved in cover at small extra cost. Your powder will sell better in these new boxes. *Write for samples.*

Hinged Cover Rouge Boxes

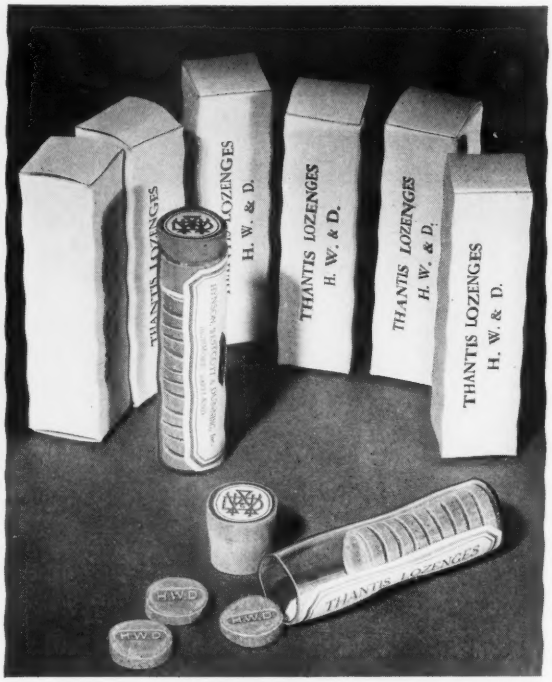
More News! Standard plastic containers for cake or paste *rouge or eye-shadow—with hinged covers. Smart, distinctive* and extra-convenient. No more unscrewing of covers. Take standard-size rouge cakes. Mirrors inside cover and plated metal band on top. Your trade-mark engraved on cover if desired.

For samples and further information, write Norton Laboratories, Incorporated, Lockport, N. Y.

NORTON

DODGE *Closures*

Designed to Guard the Integrity of the Contents



REPUTATION

THE name of Hynson, Wescott & Dunning, Inc. has been long established with the medical profession. Doctors who prescribe Thantis Lozenges do so with an assurance that every *package will conform with the strictest* standards in every respect.

The closure used on each Thantis Lozenge bottle is a Dodge cork, true to size, true to grade—like every Dodge Closure, truly "designed to guard the integrity of the contents."

Talk to Dodge about your closures. You will find the Dodge representative experienced, intelligent, helpful. DODGE CORK COMPANY, INC., LANCASTER, PENNA.

CORKS · MOLDED FLANGE CORKS · MOLDED QA CAPS

A SERVICE FOR BUYERS OF *Collapsible Tubes*

No container surpasses the collapsible tube in safety, convenience and in the matchless beauty of brilliant color combination.

Where your product is a cream, a cosmetic requiring a beautiful, well-designed container that will give individuality and personality to your product, let our design department cooperate with you in developing a striking container.

Our fifty years experience in the manufacture of collapsible tubes is cordially placed at your disposal.

WHITE METAL MFG. CO.
HOBOKEN, NEW JERSEY

COLLAPSIBLE TUBES *and* BOTTLE SPRINKLER TOPS

New York Office:	Chicago Office:	Detroit Office:
F. L. Butz	Charles A. Rindell, Inc.	R. M. Stevenson
393 Seventh Ave.	64 West Randolph St.	506 Donovan Bldg.

GIVE *Your* PRODUCT A CHANCE

Give it a package that makes it look like the genuine article it is.

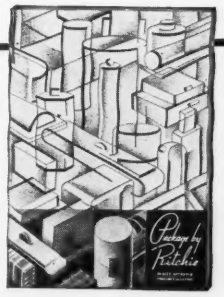
Much depends on that product. Time, money and hopes are tied up in it. Too much is involved for you to gamble on a package that's ordinary — unimpressive.

YOUR product deserves a package that sets it apart from competing items in the store . . . A package with the appeal that makes people buy!

We've been helping leading manufacturers to design such packages for over seventy years.

"SHOW THE RITCHIE MAN IN"

The Ritchie salesman has valuable ideas that you can use. His knowledge of point-of-sale merchandising is based on first hand experience. Discuss your sales problems with him. You'll find the time you give him well spent.



WRITE FOR THIS BOOKLET. It will give you a new appreciation of modern packaging, and new ideas about point-of-sale merchandising. Describes the Ritchie organization in detail, and tells you how to take advantage of Ritchie's unusual designing facilities. Send for your free copy.

W. C. RITCHIE AND COMPANY
8847 BALTIMORE AVENUE, CHICAGO

New York Philadelphia Detroit Minneapolis
Cincinnati Los Angeles St. Louis Ft. Wayne

DESIGNED *for a* PURPOSE

Standard Tubes are not designed "the easiest way" or by a sudden inspiration. After a careful study of the product and its uses, we plan a tube to best meet the requirements.

Eye Tip and Nasal Tip Tubes show this care in design. They have rounded openings that are smooth and non-irritating. There is no need for a cork because t e cap is so constructed that it forms an airtight seal against the tip when screwed down tightly.

Why not send for a catalog describing Standard Collapsible Tubes and Applicators "designed for a purpose."

STANDARD SPECIALTY *and* TUBE CO.

NEW BRIGHTON . . . . . PENNSYLVANIA

NEW YORK REPRESENTATIVE: H. T. Warren, Room 906, 331 Madison Avenue

RIEGELINE

FOR

TRANSPARENCY

WITHOUT EXPENSE

Riegeline is a newly developed product, combining the economy of ordinary glassine with the transparency of more expensive wraps. It twists well, works rapidly on any wrapping machine, and will not expand in wet weather or shrink to the splitting stage in dry weather.

LIBERAL SAMPLES AND PRICES PROMPTLY FURNISHED

RIEGEL PAPER CORP.

342 Madison Avenue · New York

BOTTLES and JARS

- A full line of bottles and jars always in stock for immediate delivery.
- Available in small or large quantities. Jars: Clear, Opal or Colored, in all standard sizes—any quantity from stock.
- Perfume bottles, standard moulds or special design.
- Lotion bottles—many very attractive designs for your immediate use.
- Bottles and jars with and without caps. Let us quote on any size order for any type of bottle or jar.

HAGERTY BROS. & CO.

10 PLATT ST., NEW YORK CITY

Musk Tibetene

the latest arrival

MUSK TIBETENE, the latest arrival in the family of musks, deserves your attention. It promises to be one of the most important contributions made in recent years to the perfumer's art. It combines all the best qualities of the known musks without their limitations. Its chief advantages lie in its fine odor, which resembles that of Musk Ketone, and its high solubility in dilute alcohol. You'll find **MUSK TIBETENE** the ideal fixative for toilet water, Eau de Cologne and other toilet articles of low alcohol content. May we send you a sample?

GIVAUDAN
DELAWANNA INC.
80 FIFTH AVENUE, NEW YORK, N. Y.

Cetyl Alcohol Pure

THE most important element in cetyl alcohol is *purity*. Givaudan safeguards this element by the strictest methods of production control that have yet been developed. Here are the reasons why Givaudan's Cetyl Alcohol *Pure* is unquestionably superior for use in creating uniform, high quality cosmetics:

1 Cetyl Alcohol Pure absolutely will not irritate the most sensitive skins.

2 It has no foreign by-odors.

3 Its color is pure white.

4 It contains no palmitic acid or other impurities.

5 It will give the skin a pronounced satiny finish.

6 Cetyl Alcohol Pure has therapeutic value and is absorbed and obstinately retained by the epidermis (U. S. Dispensatory).

7 It is decidedly emollient.

8 It is a uniformly solid material.

9 It is made entirely from spermaceti.

GIVAUDAN

NEWS

People

John G. Searle Elected President

At a recent meeting of the directors of G. D. Searle & Co., Chicago, Dr. C. H. Searle was elected chairman of the board, and John G. Searle, his son, was elected president of the company.

JOHN G. SEARLE

Mr. Searle's election to the presidency of the company marks the third generation of the Searle family which has assumed charge of the affairs of this pharmaceutical house since its beginning in 1888.

Gardner Joins Morse International

Morse International, Inc., has announced the appointment of Edward H. Gardner, formerly executive secretary of the advisory committee on advertising of the Proprietary Association, as vice-president. He will work chiefly on the account of the Vick Chemical Co.

Johnson of Morny Visits Here

S. C. Johnson, general manager of Morny, Ltd., London, is visiting America for the first time. Accompanied by his wife, the well-known singer, Elena Danieli, he will go by way of Bermuda, Jamaica and Panama to Los Angeles. After a visit with Mrs. Johnson's family, they will return to New York where Mr. Johnson will make his headquarters at the offices of the Morny Sales Co.

Fitch Heads Des Moines College

Fred W. Fitch, president of the F. W. Fitch Co., Des Moines, is succeeding Carl Weeks, president of the Armand Co., as president of the Des Moines College of Pharmacy.

Douglas in Europe

B. M. Douglas, Sr., vice-president and general manager of the Bourjois Sales Corp., New York, sailed on the SS Normandie, June 17, for Europe. This is Mr. Douglas' annual trip abroad during which time he will visit the London and Paris offices of the company. He plans to return to New York about the middle of July.

De Saxe Advances to V. P.

At the annual meeting of the board of directors of Grove Laboratories, St. Louis, J. R. De Saxe, sales promotion manager was elected vice-president. Mr. De Saxe

J. R. DE SAXE

went to Grove Laboratories four years ago from an executive position with the Bay division of Parke-Davis Co. At the same meeting, R. W. David, who has been with the company for over twenty years was elected comptroller.

Montenier to Europe

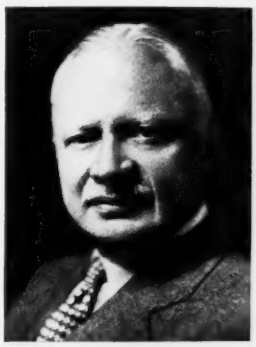
J. B. Montenier of American Advertised Products Co., Chicago, has gone to Europe for a two months trip.

Yeast As a Cosmetic

The Red Star Yeast & Products Co., recently brought suit to prevent the Collector of Internal Revenue from assessing and collecting excise taxes on yeast manufactured and sold by it. The company maintained that yeast is used in bread making and beer production and therefore is not subject to the excise tax. The decision handed down by the Circuit Court of Appeals states that, inasmuch as the company advertises its product as a cosmetic it is subject to the excise tax.

Leonhardt Sails Abroad

F. H. Leonhardt, president of Fritzsche Brothers, Inc., New York, sailed June 27 aboard the "Rex" for a three month European trip, accompanied by his wife and daughter, Dorothea, and his daughter's friend, Miss Hylah Coley.



F. H. LEONHARDT

The party will visit Spain, France, Germany, Austria, Italy and Switzerland, with short trips to Morocco, London and Amsterdam. Mr. Leonhardt will inspect the raw material producing regions of these countries and particularly those serving his organization as sources of supply. A short stay at the company's factory in Seillans, France, will be made.

Davis Factor Returns

Davis Factor, who has been in London for the past six months during the organization of Max Factor, Hollywood and London (Sales) Inc., has returned to this country.

Twenty Years with Florasynth

Louis A. Rosett, Alexander Katz and Charles L. Senior have completed twenty years with the Florasynth Laboratories, Inc., New York. During their association the company has grown considerably and now has branches in Los Angeles, Dallas, Chicago, San Francisco, Montreal and Toronto. It is the sole American and Canadian agency for Schmoller & Bompard S. A., Grasse, France, distillers of natural floral products.

PREPARED FROM
THE FINEST
MATERIALS AND
ENTIRELY FREE
FROM ADULTERANTS

PRICE'S *triple pressed* STEARIC ACID is used by leading manufacturers of the finest toilet preparations, shaving creams and toilet soaps.

Of guaranteed English manufacture, it is highly crystalline and white in color.

Melting point is 130°-133° Fahrenheit.

World famous for its unvarying uniformity in quality.

Packed in slabs of about one inch thickness in double burlap bags with a third protective inner bag forming a muslin liner.

Quotations for carloads or less upon application to exclusive American Representatives:

ORBIS

PRODUCTS CORPORATION

215 PEARL STREET, NEW YORK - FACTORY & LABORATORY, NEWARK, N.J.

CHICAGO
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BOSTON
131 State Street

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Water Soluble Gums	Waxes	Cosmetic Raw Material	Fruit Flavors
Thymol	Stearic Acid	Oleo Resins	Food Colors
Aromatics	Essential Oils	Perfume Bases	Quince Seed
Rice Starch	Zinc Oxide French	Olive Oil	Irish Moss

MANUFACTURED BY PRICE'S OF LONDON, ENGLAND

Penick Jr. to Europe

S. Barksdale Penick, Jr., vice-president of S. B. Penick & Co., New York sailed June 27 on the Aquitania for Europe. He will go to England, France and Germany and, if time permits, the Balkan countries, returning to this country about the middle of August.

Lawson Loses Appendix

Fred A. Lawson, advertising director of the E. L. Patch Co., Boston, underwent a successful operation for appendicitis at the Melrose Hospital, Melrose, Mass., on Sunday, June 28.

Peckham Receives Degree

An honorary degree of Doctor of Pharmacy was conferred upon William G. Peckham, president of the Norwich Phar-

WILLIAM G. PECKHAM

macal Co. at the annual commencement exercises of the Rhode Island College of Pharmacy and Allied Science.

Magnus Elected Director

Percy C. Magnus, president of Magnus, Mabee & Reynard, Inc., New York has been elected a director of the New York Casualty Co.

Stern Abroad

Richard Stern, president of Ferd. Mulhens, Inc., New York, (4711), sailed for Europe with his family on June 20. Mr. Stern expects to divide his time between business and a vacation while abroad.

Spilker Resigns from N. E. Tube

A. G. Spilker, formerly vice-president and director of sales in the middle-western territory for New England Collapsible Tube Co., Chicago, culminated a connection of twenty years with that company on June 1. He is now enjoying a much needed rest at his walnut ranch in California. His plans for the future have not yet been announced.

Keller Abroad

G. Keller, secretary and treasurer of Schimmel & Co., New York, sailed with Mrs. Keller on the SS New York, June 25 for Europe. He will travel in France, Spain and England and will spend considerable time at the associated house of Schimmel & Co., A. G. Miltitz-Leipzig. Dr. and Mrs. K. T. Keller returned on the same boat. Dr. Keller who was in this country for two months studying American methods, is the production manager of Schimmel & Co., A. G.

Pacini to Europe

Dr. August J. Pacini, president of Pharmaceutical Specialties Co., New York, sailed on the Normandie for a six weeks

DR. AND MRS. AUGUST J. PACINI

trip to Europe on July 1. At the invitation of cosmetic firms in France, England, Germany, Czechoslovakia and Italy, he will explain his discoveries on the use of Vitamins E. and F. in cosmetics.

J. & J. Appoints Mercer

Lester H. Mercer has been appointed director of the Red Cross products division of Johnson & Johnson, succeeding G. Ellsworth Gale who recently resigned. For the last twenty years he has been with Miller Rubber Co., Inc. of Akron. For the last seven of these he was drug sundry sales manager.

Goves Not in Contempt

The Massachusetts Supreme Judicial Court has refused to hold Mrs. Lydia P. Gove and Miss Caroline Gove of Lynn, Mass., in contempt of court for their failure to attend directors' meeting of the Pinkham Medicine Co. As they own half of the stock, their absence makes it impossible for the organization to function.

George R. MacDonald Jr.

Announcement has been made of the birth of a son on May 29, to Mr. and Mrs. George Robert MacDonald of Waban, Mass. The child has been named for his father. Mr. MacDonald is New England representative for Ungerer & Co.

Frascati Joins Firmenich

Firmenich & Co. Inc., 135 Fifth Ave., New York, announces the appointment of Dr. A. T. Frascati as head of its perfume laboratory.

Dr. Frascati has been widely known in the cosmetic and perfume industry for many years, his most recent connection being with Max Factor & Co. of Hollywood, where he was in charge of that organization's perfume laboratory, in addition to which he has just completed supervision of the organization of the new Factor plant at London, England. Prior to

DR. A. T. FRASCATI

his connection with Max Factor he was with Parfumerie St. Dennis, and other well-known houses.

For the past month Dr. Frascati has been studying new products and conditions at the Geneva, Switzerland plant of Chuit Naef & Cie (Firmenich & Cie, Succr's), European principals of the newly organized Firmenich & Co., Inc. He made an inspection of production problems, as well as a thorough survey of the perfume industry of Paris. Dr. Frascati is a graduate of Syracuse University and received his doctor's degree from John Hopkins University.

Harris on Trip

Herbert Harris, president of Parfums Charbert, New York, left June 29 for a trip to the Pacific Coast. En route Mr. Harris will stop in Chicago and visit with James H. Clock, who is in charge of the Chicago sales for Charbert. While in California, he will also confer with his Coast representatives, Mrs. Germaine Fields and Mrs. Bea Frank. Besides taking care of business, Mr. Harris expects to find some time for a vacation and a visit with his family on the Coast, and plans to fly back to New York during the latter part of July.

BACK UP YOUR SALESMEN WITH A *Sales* PACKAGE

● *There's all the difference in the world between a* package with the single function of containing the product and a *Sales*package that helps *sell* the product. Many proprietary and pharmaceutical manufacturers know this by actual experience. They are now relying upon the Complete Packaging Service of Owens-Illinois for the coordination of quality glass containers, closures, *labels, cartons and cases—essential in creating a Sales*package. You can profit by doing the same.

Service, in the sense of prompt delivery, is particularly important in times like these when business is on a *definite upswing. Your requirements may come sud-*denly and need quick action. Owens-Illinois diversity of operation, with twenty-four plants, is the best guarantee of prompt emergency service. Depend upon Owens-Illinois for all forms of *Sales*package Service.

Owens-Illinois Glass Company . . . Toledo, Ohio.

● *The Classic Oblong* (Design Patent No. 94824) *is available in ½, 1, 2, 3, 4, 6, 8, 12, 16, and 32 oz. capacities.*

● *There's more to a closure than just attractive appearance. Let an Owens-Illinois salesman explain.*

OWENS-ILLINOIS *Glass* THE CASEAL *Sales*CAP

OWENS-ILLINOIS
Containers and Closures

Bowden in Olympic Hand-Ball

Walter Bowden, of New York Quinine & Chemical Works, Brooklyn, N. Y., has been selected to play Center Forward position on the American Olympic Field-Handball Team to compete in Berlin, Germany, in August, and is now on his way to Germany. Mr. Bowden, born in Manhattan 25 years ago, attended public

WALTER BOWDEN

school in Queens, where he played on the basket ball and baseball teams. Later he attended Newton High School where he followed the same sports. After leaving high school, he joined the Brooklyn German Sport Club where he received his training in field handball. Mr. Bowden is in complete charge of stock of finished goods at New York Quinine, and is known throughout the plant as "Larry."

Companies

Parfumerie de Raymond Expands

K. C. Fay, president of Parfumerie de Raymond, New York, sailed June 9 on the SS Columbus for London and Paris to inspect the newly opened London factory at Waddon, Surrey, England, and to establish a depot in France. Mr. Fay had just returned from an extensive trip, but active business conditions abroad necessitated immediate return. He expects to return to New York in September.

M. J. Fay, of Parfumerie de Raymond, sailed June 17 to join K. C. Fay. While in Europe, Mrs. Fay will visit several aromatic laboratories and plans to spend some time in Grasse in the flower oil section.

James A. Kelly, formerly of Guerlain, Dorothy Gray and Corday, has joined Parfumerie de Raymond and will represent them in metropolitan New York and New England.

Adele L. Horn has been appointed to do special promotion work in metropolitan New York and New Jersey.

Mainker Heads Chelsea Labs.

At the regular stockholders meeting of the Chelsea Laboratories, Inc., Newark, N. J., R. Mainker, chief chemist, was chosen president of the company.

Hints Sales, Inc.

George A. Stevens, until recently vice-president and general sales manager of Elizabeth Arden, has acquired the entire sales rights of "Hints Laxative Mint" for this country and all foreign countries. He has established Hints Sales, Inc., to control and direct all sales and marketing plans for "Hints."

Celestina Hay Organized

Celestina Hay Toiletries has recently been organized with offices at 551 Fifth Avenue, New York. The company plans to introduce a complete line of toilet preparations ready for the market some time in July. The New York office is under the supervision of Reginald L. Seligman, production manager, and Miss Celestina Hay.

Ewald Joins Tampax

Fred H. Ewald has joined Tampax, Inc., New York, and will act as western sales manager for that company with headquarters in Chicago. He is well known to the trade through his connection with Lehn & Fink for which company he covered Michigan, Ohio and Indiana.

Freedman Joins U. S. Vitamin

Dr. L. Freedman, formerly research chemist with Winthrop-Metz Laboratory, Albany, is now associated with the U. S. Vitamin Corp., New York, as assistant technical director.

Schering Joins A. N. A.

Association of National Advertisers, Inc., has announced that the Shering Corp., Bloomfield, N. J., has been elected to membership. E. Hammer will represent the company in the association.

Mrs. Spicer Heads Company

Mrs. C. R. Spicer has been elected president and general manager of the Charles R. Spicer Co., Inc., Memphis, Tenn. She succeeds her husband who died in December, 1935. Plans for the addition of new products to the line have been made and J. C. Miller has been appointed assistant manager in active charge of operation.

Dow Enlarging Plant

The Dow Chemical Co., Midland, Mich., is enlarging its plant by the construction of a new building which will be used as a general analytical laboratory.

Firmenich Housewarming

Firmenich & Co., Inc.'s official housewarming, a cocktail party, was held at its new offices, 135 Fifth Ave., New York, on June 9.

Milton Goude Organized

Milton Goude has been organized for the manufacture and sales of toilet preparations by Mrs. L. Goodman, formerly president of Lottie Penter, Inc. Offices have been taken at 7860 Santa Monica Blvd., Hollywood.

Parento Appoints Dunstan

Compagnie Parento, Inc., Croton-on-Hudson, N. Y. announces the appointment of Howard A. Dunstan as sales representative. He has been with the company for over seven years, starting as an assistant in the laboratories. His territory will include New York, New Jersey and New England. He will make his headquarters at the New York office of Compagnie Parento.

Stearns Pays Dividend

For the first time since September, 1931, Frederick Stearns & Co., Detroit, has paid a dividend on its common stock. June 30, a dividend of 25 cents a share was paid on the 131,650 shares of common stock in the hands of the public.

Owens Buys Another Can Maker

The Owens-Illinois Can Co., recently organized by Owens-Illinois Glass Co., Toledo, in order to round out its line of container products, has acquired the assets of the St. Louis Can Co., St. Louis. The company plans to produce numerous varieties of metal containers in the St. Louis plant which is the third plant of the kind acquired by Owens-Illinois Glass Co.

Ey-Teb Continues

The business of Ey-Teb, Inc., including trade-marks, goodwill, patents, and merchandise, acquired the middle of June by Jules V. Riviere Perfumes, Inc., will be continued at the latter's quarters at 18 West 20th Street, New York, under the name of Ey-Teb Sales Corp., it was made known by Murray W. Morin, president of the Riviere Perfumes, Inc. Mr. Morin is also president of Isabey, Renaud, and Fioret Perfumes.

American Chlorophyll Moves Plant

American Chlorophyll Co. is now located in a large factory on the Potomac at Alexandria, Va. The move was made necessary by a fire which recently destroyed the company's plant in Washington.

Gaston Patent

Gaston Taib, president of Gaston de Paris, New York, announces that he has obtained a design patent on his face powder box. The patent number is 98,741.

CLOSURE *Beauty* AND *Charm* ADD "BUY-APPEAL" TO YOUR PACKAGE

ARMSTRONG'S Artmold Caps play a prominent part in creating an artistic atmosphere for these Princess of Hollywood beauty preparations . . . winners of the Silver Award in the All America Package Competition. By adopting white Artmold Caps and gold metallic labels for each container, a distinctive color harmony and contrast have been achieved.

Armstrong's Artmold (molded) Caps add the final touch of rich, luxurious appearance to any package. They may be specially molded with your own private design or trade-mark . . . or you may make your choice from a wide variety of standard designs in bright colors or delicate pastel shades.

Besides adding beauty and distinction to a package, Armstrong's Artmold Caps also provide security and convenience. They seal surely and safely, yet even the most delicate feminine fingers can remove or replace them with a simple twist. Give your packages the eye-appeal and protection of Armstrong's Artmold Caps. Write today, for full information, samples, and prices. Armstrong Cork Products Company, Closure Division, 913 Arch Street, Lancaster, Pennsylvania.

Armstrong's ARTMOLD CAPS

Janie Lincoln Expands

Janie Lincoln, Inc., formerly of Tiffin, Ohio, has leased the whole third floor of 2010 Euclid Ave., Cleveland, Ohio, as well as the entire fifth floor of 1937 Prospect Ave. S. E. adjoining in the rear. The additional space was taken because of expanding business in cosmetics and toilet preparations, originally produced by Janie Lincoln in her own laboratories. The company personnel has been increased to 35.

LeLong Opens in California

Lucien Lelong, Inc., Chicago, has opened a new office and warehouse at 747 Warehouse St., Los Angeles. The new branch will be under the direction of Lawrence Heiner and will take care of the Lelong business in the coast and mountain states which was formerly handled from the Chicago office.

Phelps Labs. Formed

Phelps Laboratories 1863 Union Guardian Bldg., Detroit, has been organized for the manufacture of cosmetics.

Cincinnati Soap Moves Offices

Executive offices of the Cincinnati Soap Co. have been moved from Cincinnati to Dayton where the company's plant is located.

Owens Appoints John Brown

Owens-Illinois Pacific Coast Co. has announced the appointment of John Brown as manager of its Los Angeles sales branch. He has been associated with the glass container industry for the past ten years.

New Cream Manufacturer

A new company, Hoffheimer & Luis, with offices at 152 West 42 St., New York, has been formed for the manufacture of beauty creams.

Schimmel Appoints Wood in Canada

Schimmel & Co., Inc., New York, has granted the exclusive Canadian agency for its products to W. Lloyd Wood, Ltd., Toronto.

Semler Sues Franklin

The United States District Court, Eastern District of Pennsylvania, has granted to R. B. Semler, Inc. a preliminary injunction against the Franklin Sales Co. and Frank J. Kirk, Philadelphia. R. B. Semler, Inc., charges the defendents with unfair competition in connection with rebottling and imitating the Semler products.

Leser Appoints Miles Sales Mgr.

Gilbert W. Miles is now in charge of cosmetic sales for J. W. Leser & Co., Los Angeles. He is the son of F. J. M. Miles, for many years well-known in this industry.

Adams Drug & Chem. Co. Formed

The Adams Drug & Chemical Co. has been organized in Boston to manufacture drug products. The president of the new company is Paul Demas and the treasurer is Abraham Gorvitch of Brookline.

Monsanto Increasing Power

The Monsanto Chemical Co., Monsanto, Ill. is enlarging its power plant facilities. This will make it possible for the company to increase its production considerably.

Fritzsche Publishes Book

Fritzsche Bros., Inc., New York, whose business was founded sixty-five years ago has marked this anniversary by issuing a very beautiful leather bound book. The business was started on Beekman St., New York, in 1871 and continued in that location until a fire in March, 1935, made a move to new quarters wise. The company then took 80,000 square feet of space in the Port of Authority Commerce Building, New York, where it set up a plant equipped with every modern facility. Instead of telling the history of the company from its beginning, the anniversary book tells with extremely fine photographs by Margaret Bourke-White, the story of Fritzsche Bros. as it is today.

Whitehall-Tatum Booklet

Whitehall-Tatum Co., New York, is this year celebrating its one hundredth anniversary. In connection with this anniversary it has published a booklet, "How Glass Bottles are Made," copies of which will be furnished upon request.

Pepsodent Restrains Pearledent

The Pepsodent Co., Chicago, which opposed the registration of the trade-mark "Pearledent" for use on dentifrices by the Comfort Manufacturing Co., Chicago, has won a decision in the Court of Customs and Patent Appeals. The court ruled that "Pearledent" when used on dentifrices would be confusingly similar to the trademark "Pepsodent" which is used on identical goods and that the Pepsodent Co. was first in the field and therefore has the prior right.

Dan Nealon Says----

Last month we incorrectly placed our friend, Tom Lilly, with the wrong company. We hasten to state that Tom ably represents the Sherwood Petroleum Company, makers of that interesting product Tan-Jell.

• • •

The first week in June was given over to farewell parties for the Bert Fisks. Paris gave them a grand send-off, crowds at the station, telegrams, tears and everything. Bert's place on the faculty of the E. W. (Grove Laboratories) Grove High School is still vacant.

• • •

Society Notes—Messrs. Carso and Janeck gave a sundown cruise on the S. S. Peabody. Dinner was served on the Quarter-deck, which was enjoyed by the hosts, the C. A. Matthews and the D. F. Nealons. Carso, the Old Salt, boxed the compass perfectly.

• • •

Morris Shapiro and Ben Spears of Lucky Hart Laboratories of Memphis gave us a personally conducted tour through their factory. The way Ben Spears handles petrolatum would delight La Chilson, and that long line of busy order-packers would delight anybody.

• • •

Albert (Wurzburg) Glazer took time off to see his brother cap-and-gown it at Urbana, Illinois.

• • •

Among the brow-moppers in the Peabody lobby a few weeks ago we spied Burtbox Jackson and Givaudan's Shafto.

• • •

Friend Arron Chisholm, inventor of that swell powder dispensing device is getting some nice and well deserved publicity on a fine idea.

• • •

Economic Machinery Company's Arthur Frykholm dropped in to inspect our World Labeler last month.

• • •

Nadinola's ad-man, F. M. Allen, Dan Tucker and I went fishing in the Cumberland River last week. Lots of fun but no fish—'twas ever thus!

• • •

Hazel-Atlas's M. A. Carso has just returned from a motor trip to upper Michigan where his family is spending the summer. A record of 15 hours elapsed time between Traverse City, Michigan and Paducah, Kentucky was made on the return trip.

Paris, Tenn. *July 1, 1936.*

Norwich Restrains Amer. Ph. Co.

Norwich Pharmacal Company has obtained a temporary injunction against the American Pharmaceutical, and Philip Katchurin restraining them from infringing Norwich's trade-mark, "Unguentine." The order, issued by Judge S. A. Cotillo, of the New York Supreme Court, reads as follows:

1. That the defendant American Pharmaceutical Co., Inc., its officers, agents and servants, and the defendant Philip Katchurin, his agents and servants, be and they hereby are enjoined and restrained during the pendency of this action (a) from infringing plaintiff's registered trademark "Unguentine"; (b) from manufacturing, selling distributing, advertising or otherwise dealing, directly or indirectly, in medical or surgical dressings under the names "Unguentine," "Antispetic Unguent," "Unguent," or any other name or names which simulate plaintiff's registered trade-mark "Unguentine."

2. That the bond in the sum of $10,000 submitted by the plaintiff as a condition to the granting of this decree be and the same is hereby approved.

3. That the Clerk of this Court be, and hereby is, directed to place this case at the head of the ready calendar of Special Term, Part III, of this Court, for the week commencing October 5, 1936.

Among the products of the defendant is one known as Afko Unguent, which is sold in a tube similar to the Unguentine tube although the color scheme differs. On the package is the observation: "The Modern Aid for Sunburn, Minor Burns, etc." The two products are almost identical in color, consistency and odor, the defendant's product being slightly paler. Defendant explained that since 1934 it had used the name "Unguentum A.P.C.", but it has recently ceased using the word Unguentum and does not intend to resume that use, although the word is contained in the U. S. Pharmacopoeia.

Quinine and Bismuth in Chile

Arrangements have been made by Chilean and Bolivian capitalists for the establishment of manufacturing plants in Chile which will turn out large quantities of cocaine, quinine and by-products of bismith. The companies are expected to compete successfully in world markets.

Albert Verley Price List

Albert Verley, Inc. has just issued a new wholesale price list, which comprises a fifty-six page booklet illustrated with many exceptionally lovely photographs. There are sections devoted to Suggestions for the Five Popular Basic Odors, Synthetic Aromatic Products, Albert Verley Creations, Bouquets, Terpeneless Oils and the products of Tombarel Freres, Grasse, France. There is an appendix which contains material compiled from the writings of Albert Verley on the Constituent Elements of a Complete Perfume and the Fixation of Perfumes. There are suggestions for the proper aging and care of perfumes and English-Metric conversion tables.

Maine Law Argued

The question of the constitutionality of the Maine cosmetic law was argued on behalf of the Toilet Goods Association in Portland on June 24, before a statutory court consisting of Federal Judges Peters, Wilson and McLellan. The court reserved decision and gave the attorney-general five days in which to file a brief in opposition to the application made to have the law declared unconstitutional. In the meantime, no effort will be made to enforce the law until its constitutionality has been established. No further action will be taken in the three cases where prosecution has been started until a decision has been reached.

Copeland Act in Louisiana

Both houses of the Louisiana legislature recently enacted a State Food, Drugs and Cosmetic Act similar to the Copeland Bill which failed of passage in Congress. The Governor of Louisiana previously promised that he would sign the bill if it passed the legislature.

A State Fair Trade Act, similar to the California act has also been sent to the Governor for his signature, as well as a bill providing a two per cent sales tax. In addition to the two per cent sales tax law, another bill is being considered which would place a twenty per cent tax upon cosmetics, candy, ice cream, and chewing gum.

The Food, Drugs, and Cosmetic Act, known as House Bill 347, is patterned quite carefully after the Copeland Bill and was evidently intended to be a supporting measure for the Copeland Bill if the Copeland Bill passed. Now that the Copeland Bill has not passed, the Louisiana Bill would have to be enacted without Federal support. The bill provides for control of advertising, factory inspection, certified colors for cosmetics, control of devices, special package requirements for drugs liable to deterioriation, and many of the other requirements which are peculiar to the Copeland Bill—in fact the exact language of the Copeland Bill has been used wherever it could be used.

If the bill is enacted, those manufacturers who do business in the State of Louisiana will have to operate in the same manner as they would have to operate in the country if the Copeland Bill had been enacted. This will mean that manufacturers will either have to keep their products and advertising out of the State of Louisiana or else comply with this bill. How to keep radio advertising out of a state is said to be quite a problem.

Health Products Goes Del Credere

Health Products Corp., manufacturers of Feen-A-Mint, Dillard's Aspergum, and White's Cod Liver Oil Concentrate, has adopted the Del Credere plan of distribution. The plan inaugurates a profit parity plan which will insure the small druggist with but $12 to invest in the products of the company, the same rate of profit as the large chain store system that buys a carload at a time, according to James DeCesare, Vice-president of the company.

The company will appoint wholesale druggists as factors to carry stocks of goods owned by the company. These factors will sell to retailers an assorted $12 deal upon which the retailer will receive a ten per cent. wholesaler's discount, and one-half dozen twenty-five cent size Feen-A-Mint free, netting 44 per cent profit. Or the retailer can buy from the wholesaler an assorted $6 deal with a five per cent. wholesaler's discount, and one-half dozen fifteen cent size Feen-A-Mint free, netting 42 per cent profit. Direct accounts will be sold on the basis of an eighty dollar minimum purchase with fifteen per cent. trade discount, and two per cent. cash discount, netting 44 per cent. profit.

The company is operating under the State Fair Trade Acts in the States of California, Washington, and Oregon, and similar action will be taken in other states as soon as possible. All dealers are to be limited in their purchases to quantities sufficient to cover only their requirements.

Colognes Zephfleurs

This new series comprises a group of floral colognes, with the cooling and refreshing effect of eau de cologne topped with a floral note. The Zephfleurs have been compounded with the idea of twelve of the most popular American floral types in mind. These new materials can be used with equal satisfaction in lotions, creams or other products and provide a special masculine appeal. Fritzsche Brothers, Inc., New York.

Emerson Drops Rebates

Emerson Drug Co., Baltimore, have announced that effective June 25, no rebates of any kind will be given. The company will adhere strictly to the policy of ten per cent. trade discounts, with eight per cent. for payments made within five days.

Fund Dinner

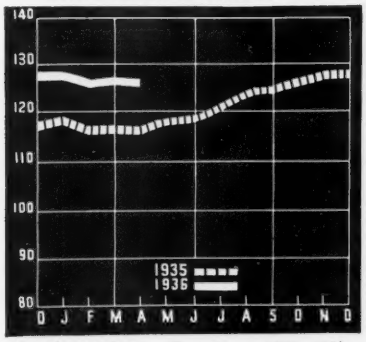
An informal dinner of the Drug and Cosmetics Division of the American Jewish Joint Distribution Committee was held June 25 at the Hotel Commodore, New York, for the purpose of launching a drive for funds for the aid of refugees from Germany. Several hundred representatives of the Drug and Cosmetics Division attended.

ADVERTISEMENT—*This entire page is a paid advertisement.*

USI **ALCOHOL NEWS** USI

JULY ★ A Monthly Series of Technical Articles for Chemists and Executives ★ 1936

ETHYL ALCOHOL PRODUCTION



(moving twelve-month averages, 1935=100)

ETHYL ALCOHOL

		1936	1935
Production			
1000 proof gals.	Jan.-April	51,773	49,136
	April	11,948	14,235
	March	13,899	12,844
Withdrawals			
1000 proof gals.	Jan.-April	48,776	45,544
	April	12,656	10,886
	March	11,754	14,620

FORMULAS FOR S.D.A. NO. 25 AND NO. 25-A ARE AMENDED

Amended specifications for Specially Denatured Alcohol formulas No. 25 and 25-A were issued in Treasury Decision 4644, approved May 25, 1936.

The new specifications which include one additional denaturant, are given below:

Formula S. D. A. No. 25

To every 100 gallons of ethyl alcohol add:
20 pounds of Iodine, U.S.P. and
15 pounds of Potassium Iodide, U.S.P.
or
15 pounds of Sodium Iodide, U.S.P.

Formula S. D. A. No. 25-A

To every 100 gallons of ethyl alcohol add:
A solution composed of 20 pounds of Iodine, U.S.P.
15 pounds of Potassium Iodide, U.S.P.
or
15 pounds of Sodium Iodide, U.S.P. and
15 pounds of water

NEW SYNTHETIC MUSK OFFERED FOR SOAPS AND PERFUMES

The superior qualities of the known musks are combined in a synthetic musk which has recently been placed on the market. The limitations of musks now in use are said by the manufacturer to be eliminated in the product.

The new musk is said to have an odor which closely approximates that of musk ketone. An advantage to perfumers is the fact that it is highly soluble in dilute alcohol, and therefore is an ideal fixative for toilet waters, eau de cologne, and like toilet preparations having a low alcoholic concentration.

For the soap manufacturer, the new musk offers a desirable feature in that it will not cause discoloration in any perfume for white soap. The soapmaker is thus enabled, for the first time, to produce a light-fast, white, perfumed product.

THREE NEW FORMULAS FOR COMPLETELY DENATURED ALCOHOL EFFECTIVE JULY 1st

C.D. Nos. 11, 12 and 13 to Replace C.D. 5-A and 10

As a result of protests to the Treasury Deparment concerning the objectionable odor of Completely Denatured Alcohols, new formulas have been introduced from time to time. Early in June three new formulas, C. D. Nos. 11, 12 and 13 were announced.

Complaints about odor of existing formulas have been made to the Department ever since the discontinuance of wood alcohol as a denaturant for C. D. No. 5 and the suspension of the manufacture of C. D. No. 1.

Due to the urgent requests of consumers, the manufacture of proprietary solvent was authorized as a substitute of C. D. No. 1. However, proprietary solvents are not authorized for anti-freeze purposes. While chemists of the Treasury Department, the producers and the chemical industry have worked diligently, none of the existing formulas have completely met the approval of users. During this period U.S.I., as well as other producers, have urged the Treasury Department to return to the wood alcohol formulas.

Meanwhile, the formulas for C. D. alcohol have been changed several times, and within the last few months new formulas have been promulgated under T. D. 4646 and T. D. 4648. The latter T. D. authorized C. D. Nos. 11, 12, and 13, replacing C. D. Nos. 5-A and 10. The composition of the new formulas is given below:

Formula No. 11

To every 100 gallons of ethyl alcohol add:

"Pontol-K" (or similar compound)	3.00 gal.
"ST-115" (or similar compound)	3.00 gal.
Gasoline	1.00 gal.
"Agdite" (or similar compound)	0.50 gal.
or	
"Hydronol" (or similar compound)	1.00 gal.

(Continued on next page)

U.S.I. ANTICIPATES BIGGEST SUPER PYRO ANTI-FREEZE SEASON

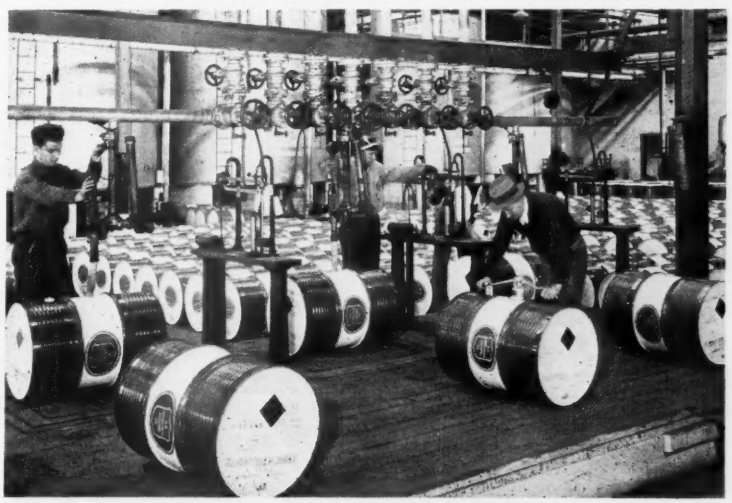
With an expanded advertising plan embodying five major media and a more complete retail and wholesale distribution system for 1936-37, U.S.I. anticipates its largest SUPER PYRO Anti-Freeze season. This program is expected to add almost 1,000,000 new users to the 4,000,000 who purchased SUPER PYRO last winter.

This superior product was immediately accepted by almost a million motorists in 1933, when it was first introduced. The qualities of SUPER PYRO have been proven by the experience of the motoring public within the past four years. Last year SUPER PYRO was the largest selling anti-freeze in its class.

Superior Qualities

SUPER PYRO perfectly meets the demand of more than three quarters of the car owners of the United States, for it is the most economical anti-freeze having anti-corrosion and lasting features. For 1936, the technical story of SUPER PYRO is further enhanced by the an-

(Continued on next page)



DENATURED ALCOHOL is drummed in this building in the Baltimore plant of the U. S. Industrial Alcohol Co. Drums are filled on a weight basis with the electrically operated automatic apparatus shown. Equipment of this kind is representative of the extensive facilities of U.S.I. for handling all formulas of alcohol and enables the Company to offer exceptional service to customers.

Prepared Monthly by the U. S. Industrial Alcohol Co.

ADVERTISEMENT—*This entire page is a paid advertisement.*

JULY ★ **ALCOHOL NEWS** ★ 1936

(Continued from preceding page)

NEW C.D. FORMULAS

Formula No. 12

To every 100 gallons of ethyl alcohol add:

"Pontol-K" (or similar compound)	4.00 gal.
Methyl Isobutyl Ketone	2.00 gal.
Gasoline	1.00 gal.
"Agdite" (or similar compound)	1.00 gal.
or	
"Hydronol" (or similar compound)	2.00 gal.

Formula No. 13

To every 100 gallons of ethyl alcohol add:

"ST-115" (or similar compound)	4.00 gal.
Methyl Isobutyl Ketone	2.00 gal.
Gasoline	1.00 gal.
"Agdite" (or similar compound)	0.50 gal.
or	
"Hydronol" (or similar compound)	1.00 gal.

The denaturants specified for Completely Denatured Alcohol are described by the Treasury Department as follows:

Agdite: "A compound petroleum product free from water and all suspended materials."

Hydronol: "An organic hydrogenation product free of water and suspended materials, and having characteristic taste and odor."

Pontol-K: "A product consisting principally of a mixture of primary and secondary aliphatic higher iso alcohols and other compounds of characteristic odor and taste."

ST-115: "A product, free from wood alcohol, containing a definite proportion of the pyroligneous bodies produced by the destructive distillation of wood."

Methyl Isobutyl Ketone is a chemical entity with a definite structural formula and is not a complex, partially purified product as are the other denaturants cited above. It is one of the synthetic ketones.

These new formulas will be available after July 1, 1936, and the trade will then have the opportunity to determine whether or not the objections to previous formulas have been eliminated.

BIGGEST SUPER PYRO SEASON

(Continued from preceding page)

nouncement of a patent granted April 28, 1936, covering all anti-freeze alcohols containing the SUPER PYRO anti-rust ingredients. The anti-rust ingredients make SUPER PYRO the only anti-freeze on the market that stops rust and corrosion of all six metals in the automobile cooling system.

Carefully conducted tests have conclusively shown that copper, iron, steel, brass, and aluminum are not damaged by SUPER PYRO. Other anti-freezes tested in the same way were found to affect at least one of the metals used in the construction of the cooling system of the modern motor car.

SUPER PYRO lasts longer, not only because it is made from 200 proof alcohol, but also because it keeps the cooling system of the car clean and thus allows the normal dissipation of heat resulting in efficient operating temperatures.

During the 1936-37 season, SUPER PYRO will be featured as the Money Saving Anti-Freeze because impartial tests have established that it lasts longer and therefore gives more economical service to the motorist than either denatured alcohol or methanol.

The distribution of SUPER PYRO will be further extended by the enlistment of even a larger number of retail outlets. Motorists can purchase this superior product in virtually every part of the United States where freezing weather occurs.

U. S. I. ALCOHOL IS DEPENDABLE RAW MATERIAL FOR ETHER AND ETHYLENE

These Anaesthetics Aid Surgery

One of the greatest contributions of alcohol to the progress of medical science was in the discovery and development of anaesthesia. Major surgical and many minor operations were impossible in past years, due to the intense pain and nervous shock suffered by the patient before anaesthesia was known. With the introduction of safe anaesthetics, this barrier was removed.

Ether, as a general anaesthetic, was first used in 1846, ninety years ago. It is made by heating ethyl alcohol with strong sulphuric acid in a leaden vessel, followed by a very exacting purification and tests to assure its necessary high quality. Practically all anaesthesia grade ether is made from ethyl alcohol. Nearly 2,000,000 gallons of specially denatured alcohol are used each year in the United States for the manufacture of ether.

Ethylene, a gas, was first suggested and employed for anaesthetic purposes about 1923. It is made by passing alcohol vapor over a selected dehydrating medium, followed by washing, purification, and compression of the gas in cylinders. More than half a million gallons of alcohol are used annually in the manufacture of ethylene.

U.S.I. produces a large proportion of the alcohol from which both ether and ethylene are made. The uniformly high grade of the U.S.I. alcohol makes it absolutely dependable for these purposes.

TECHNICAL DEVELOPMENTS

The items in this column are gathered from many varied sources. Further information may be obtained by writing to U. S. I.

U S I

New perfume odors which resemble the "odor of earth" or "new-cut wood" can be compounded by using newly-discovered microorganisms. It is suggested that the organisms can be propagated in pure culture to obtain the concentrates. The English discoverer of these new materials points out that a distinct new field of odors can be developed.

U S I

A new alkali in the form of a non-volatile organic base is on the market. The product is sold as a 40% solution of a quarternary ammonium hydroxide derivative. It is said that the material neutralizes and forms salts with organic and inorganic acids. Complete dissociation takes place in water, and in certain cases it can replace stronger alkalis.

U S I

Application of labels to molded plastic containers may be facilitated by a new adhesive. The material is said to be resistant to alcohol and moisture. It is not affected by heat or dehydrating action.

U S I

Food industries may benefit by a new lamp which will kill all kinds of bacteria and mold spores. The lamp is of the ultra-violet type, operates at a low temperature, and is low in cost. The manufacturer also claims that conditioned air may be sterilized with the lamp and it can be utilized to "pasteurize" milk or beer.

U S I

Powdered dentifrices, made with a new base using an alkali metal pyrophosphate with tricalcium phosphate, are said to require less soap than those made with tricalcium phosphate alone. The curd which results when tricalcium phosphate and soap are used, is avoided when a small quantity of the new base is added. Customary flavors may be utilized.

U S I

A synthetic coating for metals is recommended for lining beverage and food containers. It is said to be non-toxic, odorless, non-porous, and tasteless. The material is elastic and metals coated with it can be bent or stamped without damaging the finish. Application may be made by roller coating or spraying.

U S I

A new emulsifier unit which mixes at the same time that it emulsifies has been introduced. Materials to be treated are subjected to large increases and dimunitions of pressure in rapid succession and finally are ejected through a small aperture. Operation is continuous and each part of the liquid is treated in the same way; thus insuring a uniform product.

U.S. INDUSTRIAL ALCOHOL CO.

WORLD'S LARGEST PRODUCERS OF INDUSTRIAL ALCOHOL

ETHYL ALCOHOL

SPECIALLY DENATURED-*All Formulas* • COMPLETELY DENATURED-*All Formulas* • ANHYDROUS-*Denatured* • ABSOLUTE-*Pure*
SOLOX-*The General Solvent* • U. S. I. *Pyro Brand* DENATURED ALCOHOL • SUPER PYRO *Anti-Freeze*
PURE (190 PROOF) TAX PAID—TAX FREE
U. S. I.—U. S. P.-*Ethyl* • WEBB'S-*Ethyl*

Executive Offices: 60 East 42nd Street, New York, N. Y. Branches in all Principal Cities.

Foragers' Outing

With the usual gay abandon which marks the Foragers' annual outing, the members treked to Green Gables, Long Branch, June 27. Upon arrival they partook of beer and chowder and then went to work to hold the fifty yard dash, the three-legged race, the shoe race, the old-timers race, and other events. Following this was the parade around the field before the baseball game.

Then into dinner to gorge themselves with steamed clams, cold lobster, and other fixings. The Foragers cared not for the weather. At five o'clock they left for the train and Sandy Hook steamer which brought them back. We present on this page an idea of how the Foragers appear at play.

Build your Sales

on a Firm Foundation of Modern Laboratory Methods

incorporating . . . . . .

Continuous research that tests and retests all ingredients and methods.

Scrupulous attention to product purity and uniformity.

Style conscious creation of color-tones that fill consumer demand.

In short

. . . Establish your cosmetic prestige . . . build your sales with Kolmar Products . . . Smoothassilk Dry Rouge, Perm-indel Lipstick, Kolmar Serrate Puffs and other make-up products in bulk or complete packages.

Write for further information to

KOLMAR LABORATORIES
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Southern Representative
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2895 Peach Tree Road
Atlanta, Ga.

Chicago Representative
Norman Kole
11-108 Merchandise Mart

Pacific Representative
Pacific Coast Office
901 E. 31st St.
Los Angeles, Cal.

Associations

Robinson-Patman Bill Discussed

Discussion of the Robinson-Patman Bill took place at a luncheon meeting of the Drug, Chemical, and Allied Trades Section of the New York Board of Trade held July 2, at the Pennsylvania. The meeting was presided over by James C. Chilcott, Chairman of the Section, and the guest speaker was Burton A. Zorn, member of the New York Bar, and Associate Counsel of the New York Chamber of Commerce. Seated at the dias were Charles Wesley Dunn, Counsel for the Associated Grocery Manufacturers of America and for the American Pharmaceutical Manufacturers' Association; James Hoge, Counsel for the Proprietary Association; and Hugo Mock, Counsel for the Toilet Goods Association.

Mr. Zorn gave a twenty minute talk on the provisions of the bill pointing out several parts of the bill which he believed are unconstitutional. Following this Mr. Dunn told of the fact that the bill was instigated by the wholesale grocers and that of necessity he had followed the bill closely and had appeared at the Congressional hearings on the bill. He said that the grocery manufacturers at whom the bill was aimed, favor this type of legislation but believe that the bill is improperly constituted. He declared that the bill is shot full of unconstitutionalities. He declared that the provisions by which the bill extends the same allowances to all on a proportionate basis was opposed by the grocery manufacturers who wanted a provision that manufacturers should be allowed to choose to whom they wanted to extend allowances for services so long as these services were actually performed and so long as the payments made for them were reasonable.

Mr. Dunn stated that the vague wording of the bill which makes it impossible for any attorney soundly to advise his clients what steps to take, was one manner in which the bill is unconstitutional. He referred to the Cohen case in which the U. S. Supreme Court declared that the vagueness of a particular bill passed on to the court the actual writing of the wording of the bill and this action constituted unconstitutional delegation of power.

However, Mr. Dunn stated that the grocery manufacturers, at a meeting, decided that they would immediately conform with the provisions of the bill so far as they can do so. They will discontinue special allowances, they will refigure their quantity discounts so as to make them equal to the savings in cost of manufacture, selling and shipping, and they will bring their businesses in line with the purposes of the act. Then when Congress reconvenes they will try to get a better law that will be constitutional and understandable.

Following Mr. Dunn, Hugo Mock told of the difficulties of interpreting the bill for the cosmetic manufacturers. He read a bulletin which his association was sending to his members explaining that it was full of doubtful parts. When the attorneys could not understand the meaning of the law, they quoted the law in the bulletin to let the reader interpret it for himself.

Following Mr. Mock's talk, questions were asked from the floor and were answered by Mr. Zorn and Mr. Mock.

Earle Meyer Succeeds Gardner

Frank A. Blair, president of the Proprietary Association, has announced the appointment of Earle A. Meyer as executive secretary of the association's advisory committee on advertising, succeeding Edward H. Gardener who has resigned to become vice-president of Morse International, Inc., For the past two years Mr. Meyer has served as director of trade, press and public relations for the Proprietary Association. He will retain the connection which he has had for several years with the Thompson-Koch Co., advertising agency of Cincinnati.

EARLE A. MEYER

Credit Association Plans Expansion

Plans for an active expansion of the Drug, Cosmetic & Chemical Credit Men's Association were discussed at a regular meeting of the Association held June 18. The association has now completed over a year of very successful operation. During this period members who were in regular attendance at the meetings estimate a considerable saving for their companies from several bankruptcies which broadly affected the trade. To a casual observer, the frankness and fairness with which specific credit problems are discussed at these meetings is very impressive.

Expansion plans for new members call for selective invitations based upon the general standing of the company and the opinion of members regarding the proposed member's willingness to function in the same frank and cooperative spirit that has made the association so profitable and useful to the present members.

Cosmetic Standards Bureau

At a meeting of the executive committee of the Toilet Goods' Association a committee was appointed to draw up plans for a bureau of standards for the cosmetic industry. The proposed standards bureau will test cosmetics to determine whether they are harmful. It will also check on advertising and report on products for which unwarranted claims are made. It is possible that the government will be asked to work with the bureau. The chairman of the committee is Hugo Mack, counsel for the Toilet Goods' Association, and the other members of the committee are: A. H. Bergmann of the Oxzyn Co.; C. A. Pennock of Hudnut Sales Corp.; D. H. McConnell of Allied Products; Cecil Smith, of Yardley & Co., Ltd., and Herman Brooks, president of the association who is an ex-officio member.

Coutlee Heads Ad Club

At the annual meeting of the Pharmaceutical Advertising Directors' Club, in New York the following officers were elected for the coming year: president, Douglas W. Coutlee, Merck & Co., Inc.; vice-president, A. D. Brewer, Ciba Co., Inc.; secretary, E. Walton Bobst, Hoffmann-La Roche, Inc., and treasurer, Edward B. Austin, Thomas Leeming & Co.

Adam P. Piret, of the Winthrop Chemical Co., retiring president presided at the annual meeting and Edward A. H. King, of Crookes Laboratories Inc., was in charge of dinner arrangements and entertainment.

Canadian Perfumers Officers

At the annual convention of the Association of Canadian Perfumers and Manufacturers of Toilet Articles held at the Seignory Club, Lucerne in Quebec, the following officers were re-elected for the coming year: president, Robert Carr, Andrew Jergens Co., Ltd., Perth; vice-presidents, Lloyd Linton, Northrop & Lyman Co., Ltd., Toronto, and Robert Minty, Palmers, Ltd., Montreal; treasurer, E. J. Reed, and secretary G. H. Marceau.

Associated Chain Stores Meeting

The Associated Chain Drug Stores will hold a meeting in New York, September 14, 15 and 16, to discuss merchandising plans and buying policies for the winter season.

Affiliated Drug Stores Meeting

The Affiliated Drug Stores, comprising nearly 800 stores, will meet in New York September 21 and 22.

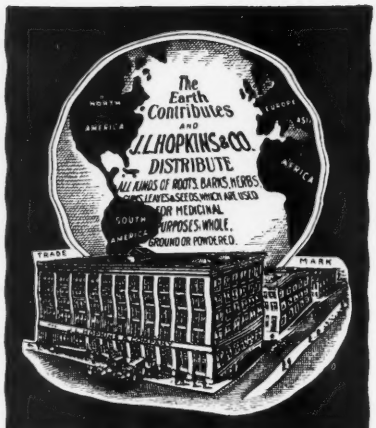
N.A.R.D. to Pittsburgh

At the convention of the National Association of Retail Druggists in Pittsburgh, September 21 to 25, nearly one hundred manufacturers will have exhibits.

BASIC INGREDIENTS

FOR TOILETRIES • COSMETICS • PROPRIETARIES

In literally hundreds of cases, Hopkins' Foreign and Domestic Botanical Crude Drugs surpass in quality U. S. P., N. F. or Government requirements, usually by a substantial margin. Each article assures you 100% maximum, unadulterated strength, tested, true-to-name and quality. Our complete stocks include every Domestic and Foreign Botanical Crude Drug for which there is a commercial demand—as well as prepared Specialties of a very high order and decided economy.



"Quality is remembered long after price is forgotten"

Deolated Almond Meal	Henasoap Shampoo
Balsam Tolu	Indian Gum (Karaya)
Benzoin Gum	Talcum
Chalk (Precip.)	Irish Moss
Chinese Shavings	Lavender Flowers
Cuttle Fish Bone	Olibanum
Gum Arabic	Orris Root
Gum Tragacanth	etc., etc.

HOPKINS' FACTOLAC

● For the preparation of permanent emulsions of both fixed and volatile oils. Insures complete homogeneous mixture of oils and water without trituration or special apparatus. An ideal emulsifier.

HOPKINS' NEUTRAL WHITE SOAP

● Powdered, granulated. Contains no soap bark, free alkali, free acid or heavy metals. Totally free of rosin, sugar and foreign matter. Snow white.

EGYPTIAN HENNA

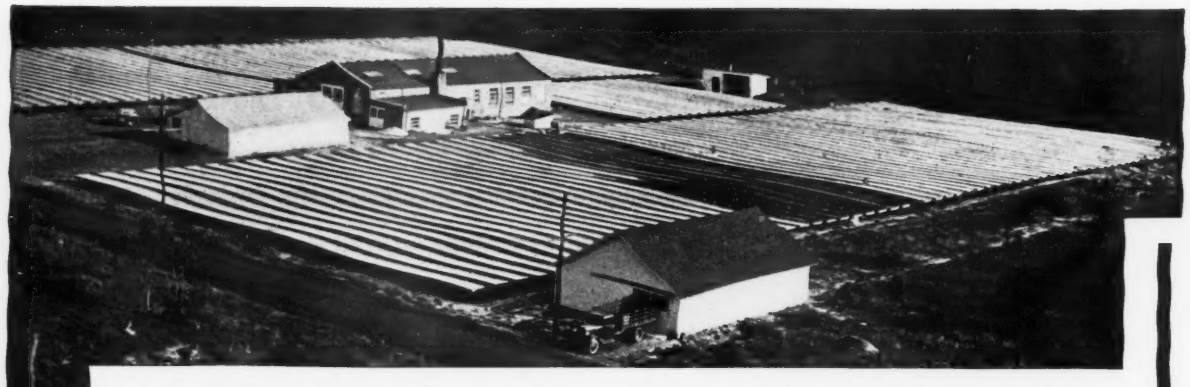
● Consists solely of choice Egyptian leaves. Laboratory tested, absolutely unadulterated. Milled on slow-stone grinders assuring intactness of full coloring content. Purely vegetable.

FREE ON REQUEST

SAMPLES, PRICES AND PRICE LIST OF HOPKINS' CRUDE BOTANICAL DRUGS AND LABORATORY BASIC SPECIALTIES.

J.L.HOPKINS & COMPANY 220 Broadway NEW YORK

. . . 106,500 square feet of SUPERFINE BEESWAX!!



Visit our plant and convince yourself that we do produce a 100% sun-bleached beeswax. Our facilities include 142 bleaching racks, each 150 x 5 feet, enabling us to produce 70,000 pounds of K. K. pure beeswax per month.

● SUN-BLEACHED AND YELLOW BEESWAX

KOSTER KEUNEN

SAYVILLE (LONG ISLAND) NEW YORK

IN THE MIDDLE WEST: WALTER H. JELLY & CO., Inc., 412-420 N. WESTERN AVENUE, CHICAGO, ILL.

Kelly Wins Salesmen Golf

The winners in the golf tournament of the Chemical Salesmen's Association held at the Baltusrol Golf Club on June 16 were: Class A. 1st, Charles E. Kelly of Hagerty Bros., 2nd, F. M. Moffatt, Jr., of U. S. Industrial Chemical Co., 3rd, E. A. Orem of DuPont-Grasselli; Class B. 1st, J. J. Kerrigan of Merck & Co., 2nd, T.S. Nichols of DuPont Grasselli, 3rd, M. D. Reeser of Howes Publishing Co.; Kickers, 1st, E. S. Burke, Edw. S. Burke Co., 2nd Walter Buehler, Barrett Co., 3rd, Henry Herrmann, General Dyestuffs Corp., 4th, R. E. Dorland, Dow Chemical Co.; lowest number of putts, J. P. Tuttle, Jr., International Printing Corp.

Michigan Assn. Holds Party

The Allied Drug and Cosmetic Association of Michigan held a party June 24 at the Meadowbrook Country Club near Detroit. Golf, bridge, cocktails, dinner and dancing were on the program.

Baltimore Drug Outing

The Baltimore Drug Exchange held its annual outing June 17 at the Hillendale Golf Club. Clarence Klingel of the Howard Drug Co. was chairman of the committee on arrangements.

Obituaries

H. Chandler Smith

H. Chandler Smith died June 11, in Marion, Pa., following a heart attack. For the past seven years, he had been a representative of Charles Pfizer & Co., New York. He is survived by his wife and three sons, one of whom is also in the employ of Charles Pfizer & Co.

Carl V. Starkloff

Carl V. Starkloff died at his home in Baltimore, June 13, at the age of sixty-eight. He was a director of the Carr-Lowrey Glass Co. and credit manager of the Maryland Trust Co., that city.

James Richardson

James Richardson died very suddenly of a cerebral hemorrhage at the age of twenty-eight. For the past three and a half years he had been art director for W. C. Ritchie & Co., Chicago. He had designed many packages for the drug and cosmetic trade and had a very bright future ahead of him.

Harry P. Fallon

Harry P. Fallon, a sales representative of the Flint-Eaton Co., Decatur, Ill., died in a hospital in Piqua, Ohio, as the result of injuries received in an automobile accident. He was thirty-two years old.

Henry J. Beck

Henry J. Beck, who was for many years a broker in oils in Chicago, died May 27, at the Orrington Hotel in Evanston at the age of seventy-two. For thirty-six years he was manager of the Chicago branch of Dodge & Olcott. At the time of his retirement several years he was in charge of the Chicago territory for Northwestern Chemical Co.

Frank Abbott

Frank Abbott, sales manager of the Mennen Company died July 3 at his home. Mr. Abbott had taken ill out west some time ago and was subjected to an operation. Later he returned home apparently well on the road to recovery. However, he had a relapse and died shortly after.

Mrs. Harry Gritzan

Mrs. Harry Gritzan, wife of Harry Gritzan of the Maryland Glass Company died July 1.

A.P.M.A. Meeting

(Continued from page 68)

some producers were allowed to set standards for other producers.

With reference to social security legislation, Mr. Dunn advised the members to make all payments to the Federal and State Governments under protest as he is of the opinion that the legislation will be declared invalid in view of recent decisions by the U. S. Supreme Court. Mr. Dunn severely criticized the tax bill particularly as regards its provision to tax undistributed earnings. He said that this provision would create a condition of temporary prosperity but would dry up the sources of future wealth.

The Tuesday morning session was devoted to a discussion of sales and advertising problems with talks given on various phases of the problems by Carroll Adams, director of sales of Davis & Geck; E. Walton Bobst, of Hoffmann-LaRoche; J. L. Rogers, of Pitman-Moore Company; and J. P. Rorer, of William R. Rorer, Inc. Tuesday afternoon was given over to a discussion of costs and cost finding methods, sales problems, and credit and collection problems. Talks, which were followed by discussion, were given by C. H. Taylor, of the Chicago Pharmacal Company; Howard S. Roe, of the Carroll Dunham Smith Pharmacal Company; and John G. Searle, of G. D. Searle & Company.

The entertainment side of the meeting, which was greatly enjoyed by the attending members, was directed by a committee under the chairmanship of R. P. Neptun, of Allaire-Woodward & Company. A ladies' putting contest, ladies' bridge were held during the day. Monday evening a costume party was held at the Casino. Tuesday evening an entertainment and midnight supper was held, and Wednesday evening was given over to the annual banquet of the association. Philip J. Steinmetz, rector of St. Paul's Church, Elkins Park, Pa. was the principal speaker at the banquet.

Golf prizes were distributed at the banquet to the following winners:

Prize Winners in Golf Tournament

Championship: Low Net, J. A. Huisking; Low Gross, C. J. Predmore; Low Qualifying, J. G. Searle; *First Flight:* Low Net, W. H. Mysch; Low Gross, E. T. Kirkland; 2nd Low Net, A. P. Connor; 2nd Low Gross, V. E. Williams; *Second Flight:* Low Net, Maurice Hoopes; Low Gross, Johnson Rogers; 2nd Low Net, C. N. Angst; 2nd Low Gross, J. W. Vance; *Third Flight:* Low Net, P. A. Rising; Low Gross, C. S. Curtis; 2nd Low Net, J. E. Bartlett; 2nd Low Gross, C. W. Merrell; *Fourth Flight:* Low Net, K. G. Hewett; Low Gross, E. S. Hessler; 2nd Low Net, G. L. Harvey; 2nd Low Gross, Wm. R. House; *Fifth Flight:* Low Net, R. W. Rodman; Low Gross, B. B. Grubb; 2nd Low Net, F. A. Degener; 2nd Low Gross, W. N. Doushkess; *Blind Bogey:* Paul Klemtner and W. H. Rorer, tied; *Long Drive:* Robert Durst; *Nearest to Pin on No. 16 Green:* J. A. Silver; *Booby Prize:* C. D. Smith, Sr.

Books - OF IMPORTANCE TO DRUG AND COSMETIC MANUFACTURERS

Modern Cosmetics—Chilson, 396 pp.	$ 6.00
Potter's Therapeutics, Materia Medica and Pharmacy—Scott, 997 pp.	8.50
Properties and Uses of Drugs—Rusby, 823 pp.	6.50
Synopsis of U. S. Pharmacopoeia and National Formulary Preparations—Fuller, 247 pp.	2.00
Pocket Pronouncing Medical Dictionary—Gould... Thumb Index	2.00 2.50
Cyclopedia of Perfumery—Parry (2 vols.), 840 pp.	10.00
The Theory of Emulsions and Their Technical Treatment—Clayton, 458 pp.	8.00
Modern Method of Birth Control—Welton, 168 pp.	3.00
The Biochemistry of The Lipids—Bull, 127 pp.	3.25
Constructive Anatomy—Bridgeman, 143 pp.	2.50
Our Vanishing Hair—Nessler, 140 pp.	2.00
The Successful Hairdresser—Wilson, 416 pp.	3.50
Handbook of Chemistry and Physics—20th Edition	6.00
Recent Advances In Dermatology—Goldsmith, 522 pp.	5.00
Commercial Organic Analysis—Allen, 10 vols., 7405 pp., each vol. sold separately, per vol.	7.50
A Treatise On Medical Jurisprudence—Oppenheimer, 290 pp.	4.00
Why Bring That Up—Montague, 130 pp.	2.00
Inorganic and Theoretical Chemistry—Taylor, 832 pp	6.00
The Exporters' Encyclopedia, 1936—1780 pp, net with Bulletin Service	20.00
Manufacturers' Practical Recipes—Jameson, 597 pp.	8.50
Exporters' Encyclopedia—1780 pp.	20.00
Rex Cole on Salesmanship—Rex Cole, 253 pp.	2.50
Dollar Makers—Eager, 197 pp.	2.00
Retail Selling and The New Order—Collins, 203 pp.	2.50
The Road to Good Advertising—Collins, 217 pp.	2.50
Henley's Twentieth Century Book of Formulas and Processes—809 pp.	4.00
Perfumes and Cosmetics—Askinson, 392 pp.	6.00
Modern Drug Encyclopedia and Therapeutic Guide—1393 pp.	7.50
How To Run Better Sales Contests—Kaufman, 222 pp.	3.50
Help Yourself To Beauty—Cocks, 281 pp.	2.00
Forensic Medicine—Kerr, 311 pp.	3.60
Diet and Die—Malmberg, 149 pp.	1.50
Inorganic and Theoretical Chemistry—Taylor, 832 pp.	6.00
Organic Chemistry—Taylor, 587 pp.	6.00
A Short Organic Chemistry—Taylor, 375 pp.	3.00
United States Dispensatory—Wood-LaWall, 1792 pp.	15.00
Remington's Practice of Pharmacy	10.00
Pharmaceutical Recipe Book—454 pp.	5.00
U. S. Pharmacopoeia XI—676 pp.	5.00
The Medical Formulary & Prescription Manual Dauer	3.50
National Formulary VI—556 pp.	$ 5.00
Prescription Writing and Formulary—Solomon	4.15
"2222" Retailing Ideas—Lyons, 336 pp.	3.00
A Text Book of Pharmacology and Therapeutics	6.50
Cosmetics and Your Skin—Dr. Goodman, 90 pp.	1.50
Rational Pharmaceutical Treatment of Common Skin Diseases—Dr. Goodman, 345 pp.	5.00
Care of The Skin in Health—Dr. Goodman, 99 pp.	2.00
Introduction to Dermatology—Sutton, 566 pp.	5.00
Essentials of Pharmacy	7.50
Handbook of Pharmacognosy	5.00
Pharmaceutical Chemistry	3.50
The Arithmetic of Pharmacy	2.00
Textbook of Physiology—Zoethout, 694 pp.	4.75
Psyllium Seed—Montague, 170 pp.	2.00
Physiology in Modern Medicine—Macleod, 1154 pp.	8.50
What Makes People Buy—Laird, 237 pp.	2.50
Wholesale Accounting and Control—Heckert & Stone, 234 pp.	3.00
Pyrethrum Flowers—Gnadinger, 269 pp.	3.50
Treatise on Permanent Wave Burns—Eberhart	2.00
Flavoring Materials Natural and Synthetic—Clarke, 166 pp.	3.00
Practical Pharmaceutical Chemistry—Cooper & Appleyard, 136 pp.	1.75
Modern Beauty Culture—Verni, 434 pp.	10.00
The Beauty Culture Handbook—Hanckel, 177 pp.	1.50
Modern Beauty Culture—Smith & Rockwood, 290 pp.	3.00
British Pharmacopoeia **French Pharmacopoeia** **German Pharmacopoeia** **Swiss Pharmacopoeia**	In stock for Immediate Delivery. Quotations on Request.
A Manual of Pharmacology—Sollman, 1237 pp.	7.50
Scientific American Cyclopedia of Formulas—Hopkins, 1077 pp.	5.50
Moderne Parfumerie—Mann. (German), 516 pp.	12.00
Leitfaden Der Modernen Parfumerie—Burger (German)	3.50
Chemistry of Essential Oils and Artificial Perfumes—Parry, 549 pp., Vol. I, **$12.00**; 365 pp., Vol. II.	10.00
Cosmetics—Koller, 262 pp.	3.50
Preparation of Perfumes and Cosmetics—Durvelle, 419 pp.	8.00
Chemical Formulary—Bennett, Vol. I., 595 pp.	6.00
Vol. II, 570 pp.	6 00
Counterfeit—Kallet, 95 pp.	1.50
The Law of Drugs and Druggists—Arthur, 487 pp.	3.00

The Drug and Cosmetic Industry

101 WEST 31st STREET ... NEW YORK CITY

Please remit with order **For other titles, consult our Book Dept.**

INDUSTRY'S BOOKS

Any book reviewed in this section can be purchased direct from THE DRUG AND COSMETIC INDUSTRY at regular publisher's price.

One Thing Leads to Another, by Fred C. Kelly, 104 pages, Houghton Mifflin Company, New York, $1.75.

This is the story, with striking illustrations by Margaret Bourke-White, of the development of the Commercial Solvents Corporation from a laboratory process for the manufacture of acetone. Even to those already familiar with the story, this re-writing will be interesting reading; to others it will be a revelation of active and intelligent management dealing with the wonders of modern chemistry.

Annual Reports on the Progress of Chemistry for 1935, The Chemical Society, London, 11 shillings.

Little need be said about this annual volume, the thirty-second in the review series. Like the others, it tells what has happened all over the world in scientific chemistry during the past year. The literature is covered thoroughly and the present status of all types of investigations is discussed. As indispensable as "Chemical Abstracts" and a lot easier to read.

General Chemistry, by James Kendall, 691 pages, D. Appleton-Century Company, New York, $3.50.

This is the revised edition of a cultural course based upon the well-known Alexander Smith texts. Its purpose, which it effectively accomplishes, is to provide students with a firm grounding in chemistry and still retain the fascination of the subject. The illustrations are a liberal education in chemistry by themselves.

New Practical Chemistry, by N. H. Black, and J. B. Conant, 621 pages, The Macmillan Company, New York, $1.80.

Intended for the use of high school students, this text also arranges materials in such a way as to emphasize their dramatic aspects without neglecting fundamental training.

Laboratory Manual of General Chemistry, by John B. Entriken, Edwards Brothers, Inc., Ann Arbor, Mich., Price $1.50.

The experiments suggested in this manual have been selected with the view of allowing the student to get, early in the course, first hand knowledge regarding the type of data on which the theories of chemistry are based.

Principles of Bacteriology, by Arthur A. Eisenberg, A.B., M.D., and Mabel F. Huntley, N.R., M.A., 6th Edition C. V. Mosby Co., St. Louis, 378 pages. Price $2.75.

This work, well known since its first appearance in 1918, has been thoroughly revised in this, its sixth edition. Among the changes included, the most important and the most drastic are in connection with the following subjects on which entirely new material has been added. Animal parasites; Hypersensitiveness, allergy and anaphylaxis. The role played by the leucocytes in infection has been entirely rewritten, presenting the subject from the viewpoint of Schilling's hemogram. A brief section on the reticulo-endothelial system has been added. The classical technic and the new Neufeld method of sputum typing in pneumonia, as well as some new culture media and stains, have been described. The new material also deals with psittacosis, brucella, rheumatism, the new Kolmer vaccine for acute poliomyelitis, and lymphogranuloma inguinale. Many changes will also be found in chapters dealing with typhoid fever, pneumonia, tuberculosis, gonorrhea, meningitis and diphtheria, the emphasis being laid on the sociologic and the public health aspects.

Complete Handbook on State Medicine, J. Weston Walch, Chief Compiler, Debaters Information Bureau, Portland, Maine, 158 pages. Price $2.50.

"Resolved: that the several states should enact legislation providing for a system of complete medical service available to all citizens at public expense." Affirmative and negative briefs are set forth as an aid to those interested in this very debatable subject.

Markets and Men, by J. W. F. Rowe, The MacMillan Company, New York, 259 pages, price $2.00.

This is a study of artificial control schemes in industry relating particularly to coffee, wheat, sugar, cotton, tin and rubber. The author examines each industry and describes the ways in which the control schemes have affected the producers, the workers and the public. Everyone is puzzled by one of the most contradictory features of the depression—the destruction of food while millions are hungry. The book finally sums up the pros. and cons. of this important subject.

SPEED with Accuracy!

1770 TABLETS per minute at LILLY PLANT

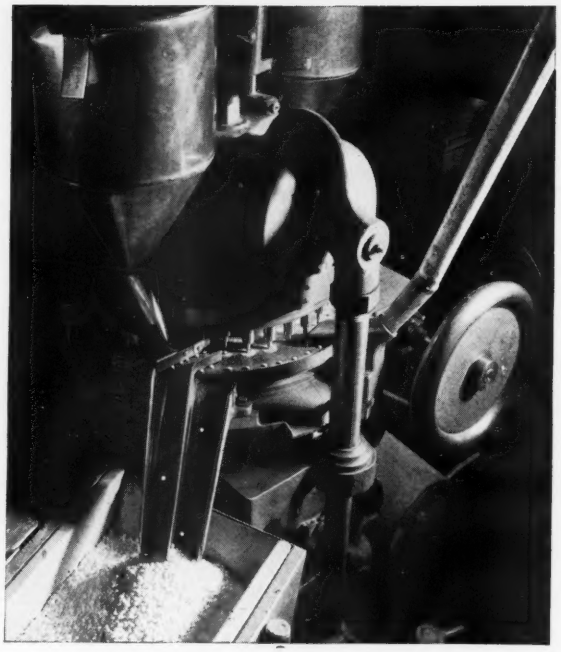
To meet the need for accurate tablets at high speeds, the Eli Lilly Company installed this Stokes "BB-2" Press. It is operating well above the rated capacity of 1200 tablets per minute.

Accurate tablets at such speeds are possible only because this machine—and other Stokes models—have certain exclusive features. Among these are

The Basic Design which includes an improved weight adjuster and simplified cams and provides for individually measuring and compressing each tablet. Without the use of multiple punches, two tablets are separately formed by each pair of punches and dies with each revolution of the head.

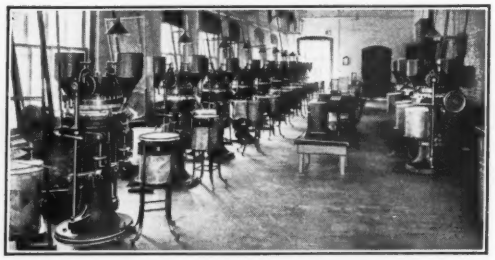
The Anti-Capping Device (patents pending) permits operation of machine at higher speeds with standard granulations as well as with those which would otherwise "cap." This feature is becoming increasingly indispensable in compressing granulations including acetanelid, amidopyrine and acetylsalicylic acid, which being prepared by the pre-compressing method, usually contain excess "fines" or powder.

Other features: Automatic Excess Pressure Release, Compact Motor Drive and Twin Disc Clutch, completely housed working parts, stainless steel hoppers.



Close-up of Stokes "BB-2" Rotary Tablet Machine operating in the Eli Lilly plant

During the past few years, our entire line has been redesigned to incorporate improvements which reflect our close association of over 40 years with the pharmaceutical field. Consider the possibility of new machines to effect new economies in your production. Consult us on the equipment listed.



Making 6,000,000 aspirin tablets per day on Stokes "BB" and "BB-2" Rotary Tablet Machines. This same manufacturer operates over 90 Stokes Rotaries here and abroad.

STOKES PHARMACEUTICAL EQUIPMENT

- Tablet Making Machines
- Granulating Mixers
- Oscillating Granulators
- Coating and Polishing Pans
- Drying Closets
- Drug Mills
- Ball and Jar Mills
- Sifters and Mixers
- Tablet Triturate Molds
- Percolators and Extractors
- Bottle Washers
- Solvent Recovery Apparatus
- Vacuum Pumps
- Special Machinery
- Tube and Jar Fillers
- Powder Fillers
- Jacketed Kettles
- Emulsifiers
- Suppository Molds
- Lip Stick Molds
- Compact Presses
- Ointment Mills
- Capsule Molds
- Capsule Fillers
- Vacuum Stills
- Vacuum Dryers
- Water Stills

FJS STOKES MACHINE COMPANY

Pharmaceutical Equipment Since 1895

5932 Tabor Road Olney P. O. Philadelphia, Pa.

PRODUCTION FORUM

BY Francis Chilson
PRODUCTION ENGINEER

THE IMPULSOR

For some time past we have been following reports of a new kind of homogenizer, developed in the plant of an English pharmaceutical company. Our interest was deepened last month through a meeting with Mr. Harry Jephcott, Managing Director of Glaxo Laboratories of Middlesex, and Henry Kleinfeld of Abbe Engineering Company, whose firm has been appointed American agents for this machine. We told you last month about meeting Mr. Jephcott, in whose plant the machine was developed, and that news would be forthcoming about this interesting new equipment, but I shall let Mr. Jephcott tell you the story in his own words:

"Improved Emulsification Process Ltd.
25 Longford St.,
London, N. W. I.

May 28, 1936.

"Dear Mr. Chilson:

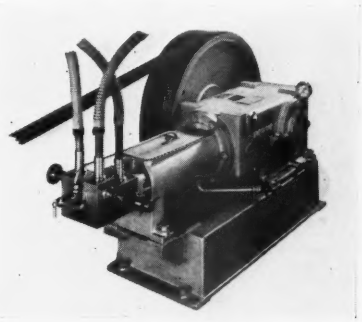
"When in New York I promised to let you have a note of the origin of the Impulsor so that you should have some subject matter upon which to write.

"Some years ago I had occasion to meet a Dr. Walsh who was carrying out a good deal of experimental work with respect to a new theory which he held for the treatment of toxaemia. Dr. Walsh considered that it should be possible to treat acute toxaemias by the adsorption of the toxins from the blood stream. He had earlier observed that toxins could be adsorbed on an oily surface and his object was to create the maximum possible surface upon which those toxins could be adsorbed. Obviously, the maximum surface could only be created by the minimum particle size, since the intention was to be inject the particles intravenously, which meant that there would need to be assurance that no particle exceeded in size a blood corpuscle, otherwise there would be at least a great risk, if not a certainty, of embolism with fatal results to the patient.

"Dr. Walsh himself came of an engineering family and had always been deeply interested in engineering problems. He found that there was no machine in existence which was suitable for the purpose he had in mind, *i. e.*, to produce a five per cent. emulsion of olive oil in water with the minimum stabilizer, each particle of the emulsion not to exceed one half mu in size. He therefore applied his own mechanical skill to the problem and the Impulsor Emulsifier was the outcome of it.

"You will readily appreciate that in its finalised form as now manufactured the Impulsor, except in essentials, bears little resemblance to the early model which Dr. Walsh created mainly out of scrap metal.

"Whilst it is obvious that for many commercial products such exceedingly high



dispersions may not be necessary, that same principle has enabled the construction of a machine which gives on the average a much higher dispersion with much lower consumption of power than, so far as we know, any other emulsifying machine.

"I am delighted to learn that your clients, doubtless under your persuasion, decided to install a 100 gallon machine, and I greatly regret that it is quite impossible for that machine to be shipped to you immediately.

"During my absence demands for the machine rose very rapidly, with the result that whilst there was quite a fair stock of machines available when I left for America, they were all sold out by the time my telegram from New York reached London and we are now waiting for a further batch to come through the shops.

"I greatly enjoyed the opportunity of meeting you when I was in New York and I hope that you will not hesitate to write me at any time if you think we shall be able to be of assistance to you.

With very kind regards,

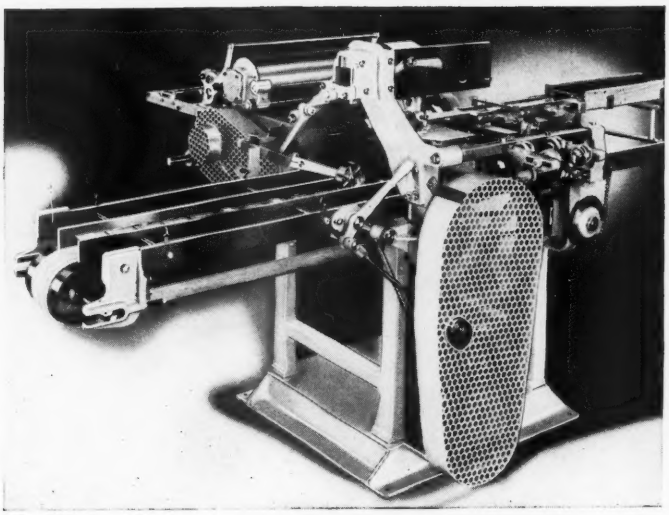
H. Jephcott."

That's the story. We have tested the machine with very impressive results on rather difficult emulsions and suspensions. It operates on a pulsation principle, the stream being directed through an orifice and suddenly released. Watching the discharge of the machine reminds you of the pulsation of an artery. You could operate the unit in your office without being troubled with noise. It is amazingly quiet. We're sorry we haven't a picture of the apparatus. But Henry Kilenfeld of Abbe Engineering Co., 56 Church St., New York, will give you all the dope you want. Foreign friends had better write direct to the head office of the company, which was formed to promote the machine, the address being that at the head of Mr. Jephcott's letter.

JAR FEEDER

Container Equipment Corporation, 88 East Kinney St., Newark, N. J. have a machine, which, though developed for the mayonnaise industry, has interesting possibilities for large manufacturers of creams, chest rubs, salts, powders and other products that are packaged in jars, drums or cans. This machine picks the jars out of the case and feeds them to a jar cleaner or filling machine. The jars can be packed in nests in one or two layers. The case is opened by the operator and in this state is fed to the machine. A head, corresponding to the inside dimensions of the case, is equipped with a set of expansion plugs that fit into the mouths of the containers as the head comes down to the case. As the head starts to withdraw, the plugs, which have rubber coverings, expand, gripping the containers inside the mouths. The head, gripping the whole

You name it— The FA will do it



Adjustable for a wide range of sizes.
Uses practically any type of wrapping material.

Would you like to wrap a number of different sized packages on a single machine? . . . The FA will do it, for it is adjustable for a wide range of sizes.

What material do you want to use—transparent cellulose, glassine, waxed paper, printed paper wrappers in cut-to-size sheets, reinforced foil printed or unprinted? . . . The FA can handle them all.

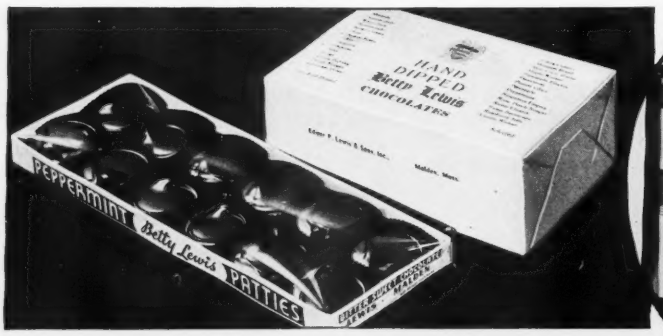
Do you want to wrap printed wrappers in roll form, registering the printing perfectly on the package? The FA, fitted with Electric Eye registering device, does it—and makes a large saving on the cost of using cut-to-size sheets.

Do you want to wrap open boats, displaying the product? Again, the FA.

Do you want production at from 60 to 75 per minute? That's the FA's speed.

Do you want all this at a price that is far less than you formerly had to pay for so versatile a machine? Then the FA is unquestionably the machine for you.

Write for information.



PACKAGE MACHINERY COMPANY, Springfield, Mass.

NEW YORK CHICAGO CLEVELAND LOS ANGELES

Peterborough, England: Baker Perkins, Ltd.

MEXICO, D. F., Apartado 2303 Melbourne, Australia: Baker Perkins, Pty., Ltd.

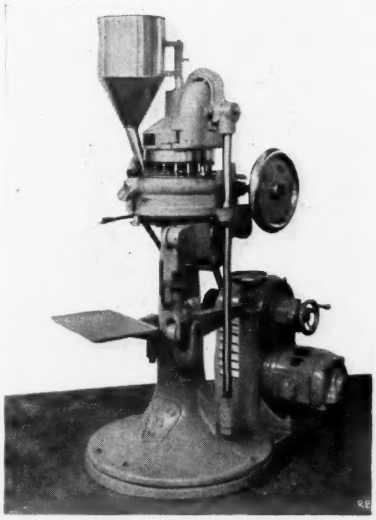
PACKAGE MACHINERY COMPANY

Over 200 Million Packages per day are wrapped on our Machines

top layer of containers rises vertically and then travels backward a short distance over a conveyor upon which it drops its load. This conveyor carries the jars, lining them up single file as it goes, to the intake of the filling machine or blower. A similar machine has been developed for packing the filled jars into the shipping cases again, which of course must be of the same dimensions as those from which they were taken—usually they are the same cases. We have never seen these machines in operation but have been informed that several of the large preserve and mayonnaise people have been using them for sometime with considerable success. While both machines are said to be adjustable within a limited range, they obviously are for large production applications. It seems to us that bottles might be unloaded in a similar fashion by using expansion bolt fingers that would go down into the bottles below the shoulders before expanding, and that such a machine might well be developed to serve average needs.

STOKES NEW B-2 ROTARY PRESSES

In a recent letter John Silver of the F. J. Stokes Machine Company, Philadelphia, calls attention to the fact that too few people seem to realize in operating tablet presses, that the pressure required to make a tablet is proportional to the size of the tablet, and that since wear on punches and dies is proportional to the pressure applied, it is desirable to adjust the pressure every time a different size of tablet is



made. Accordingly the new Stokes B-2 Rotaries, which operate at a speed from 300 to 600 tablets per minute depending upon size, is equipped with an indicator which is graduated by tablet diameters to facilitate setting the machine. This is a big improvement as many tablet makers either operate at maximum pressure most of the time or set their presses by guess and by God. The patented anti-capping device on this machine prevents capping and enables the production of the machine to be stepped up. This feature is particularly desirable in cases where tablet granulations contain considerable amounts of fines. We've seen these new rotaries in operation in a number of plants and they certainly do a very good job.

THOROUGH MIXING

It was in 1930 or '31, we think, that we first called the McClellelan Batch Mixer to your attention. Previous to that it had been used in and was, indeed, developed for the cereal and feed industry for mixing milled grain and similar products. Since that time this machine has been used throughout the trade for mixing face powder, previous to pulverization; for lubricating tablet granulations, for mixing rat feed in laboratories, for mixing chemicals and powders generally. Inasmuch as the machine has no internal moving parts, its mixing action is extremely gentle. Hence it has been used for lubricating very friable tablet granulations, which would crumble into dust with ordinary mixing. But in spite of this gentle action, the mixing is surprisingly thorough and it occurred to us that you might be interested in the following quotation from a report on work done at the Howard Testing Laboratory, of Minneapolis.

"Fifty grams of lamp black was blended with 200 grams of flour with just five revolutions of the drum. It was then carefully slicked with a spatula and it was observed that the material was absolutely uniform except for a few lumps, which had not been broken up by the gentle act of rotation.

"The best evidence of the mixing thoroughness of this machine was the following experiment: 453 grams of flour and .2268 grams of gential violet, a water soluble dye, were placed in the mixer and given exactly five revolutions. The flour was then carefully and uniformly spread out on a newspaper opened to its widest extent. The flour was sprayed with water from an atomizer and it was then observed that the violet dye was uniformly distributed throughout the whole mass of flour. We could not find a square centimeter which did not show the violet color at practically the same degree of intensity. This, we feel, was conclusive evidence of the even distribution of the dye."

We feel that way about it too. When we first became interested in the machine we thought of it as a fast way to distribute color in face powder. It required only about two minutes to effect this distribution but the gentle mixing action, as in this case, was not sufficient to rub out the small lumps caused by zinc oxide and zinc stearate. It was therefore necessary to finish off a pulverizer which is the method generally followed now. The testing laboratory quoted above suggested the use of a few small steel balls or marbles to break lumps. But we doubt if this would do the trick. At all events the idea is worth trying. In any case the trade is using these machines in increasing numbers for one mixing job or another. The machine is made by The Anglo American Mill Corp., Owensboro, Ky.

TURNTABLE

A new "giant" turntable, capable of supporting a balanced load of 500 pounds has been added to the rapidly growing SpeedWay line of display motors and mechanisms. This new Type 287AB has a typical cast steel frame, 20 inches in diameter and 10 inches high. It is powered by the new, quiet, back-geared SpeedWay 110 volt, A. C. or D. C. or Universal, "flea power" motor that eliminates need

for transformers, rheostats, resistance units, etc. The load is taken on a ball bearing thrust and the turntable is equipped with collector rings as standard equipment so that the rotated object may be lighted or operated from the regular 110 volt line. The "giant" becomes number seven in the SpeedWay Turntable line, which also provides both skeleton and finished type turntables with carrying capacities of 25, 50 and 150 pounds. Mark the address down as someday you will want a turntable for a production line: Speedway Mfg. Co., 1834 S. 52nd Ave., Cicero, Ill.

PRODUCTION MEN'S MEETING

In a few days now we'll be leaving to attend a meeting of production men from this and related industries, which is to be held at Cincinnati under the auspices of the Karl Kiefer Co., Consolidated Packaging Machinery Corp., Economic Machinery Corp., R. A. Jones & Co., Alvey Ferguson Co., Pfaudler Co., Anchor Cap & Closure, Owens-Illinois, U. S. Printing & Lithograph. A lot of the boys will be there and Ernie Finch has asked Bill Bristol and ourselves to harrangue them on topics of mutual interest. Howard Sumner will be there from the Norwich Pharmacal Co., and we expect to hear some morning about two a. m. how he and

THE MOST *Flexible* FILLER YOU HAVE EVER SEEN

So versatile it will fill practically *any* kind of container with almost *any* kind of material, the Stokes & Smith Universal Filler, with Gross Weight Scale, comprises four different machines in one single unit. These are:

1. *A gross weight scale with auger feed.*
2. *A volumetric filler measuring material by the volume of the package.*
3. *A volumetric filler measuring material by the turns of the auger, a very precise way for the smaller quantities.*
4. *A packing machine to compress the material into packages.*

Changing from one type of container to another, even from any paste to free-flowing powder, is only a few minutes work.

May we arrange a demonstration for you?

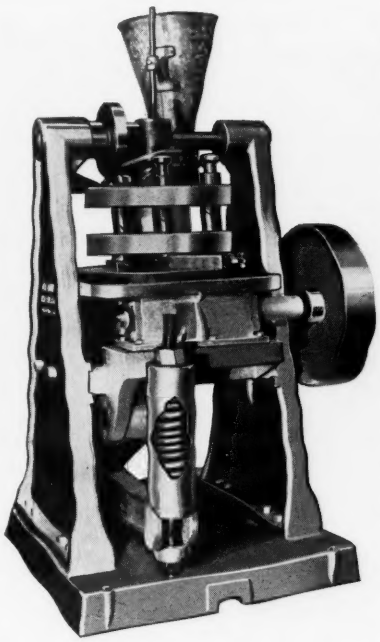
STOKES & SMITH Co
PACKAGING MACHINERY — PAPER BOX MACHINERY
4912 Summerdale Ave., Philadelphia, U. S. A.
British Office: 23, Goswell Road, London, E. C. 1

S & S G-1 Filler

Baldy Oates licked the German army. Along about that time in the morning Howard really believes his yarn. We are looking forward to a very good time and a fruitful one. If the production men of this trade get together and really do attempt to co-operate as they might very well do, the production technic of this industry will advance very rapidly. It is a matter which has been uppermost in our mind for a long time and Ernie Finch of the Karl Kiefer Company is to be commended for taking the initiative and getting a co-operative movement started.

SLUGGING PRESS

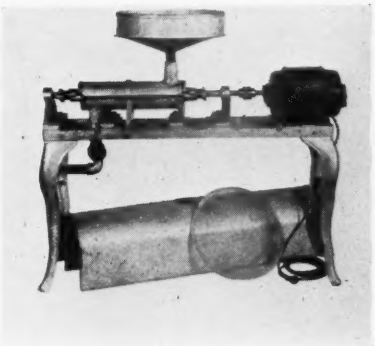
Attention is called to the adjacent photograph of a new model, heavy duty rotary press which is suitable for making deodorant blocks, granulation slugs, etc. We are informed that this machine has



been used for making salt sticks three inches long by eleven thirty seconds square and for deodorant blocks two and a quarter by seven-eighths. The lower part of the cut shows the powerful compression spring but this is all housed in when the machine is shipped.

ON MACHINE LITERATURE

Damn the catalogue or circular that does not clearly and adequately describe how a particular machine is built and how it operates. Circulars and machinery literature frequently come to us telling nothing and offering no inducement for further inquiry. Consequently they are filed in the waste basket. Apparently such literature is prepared on one of two theories: To cause you to write for further information so that a salesman can be sent up, usually wasting your time and his; or what is more likely, the machine man takes for granted too much and assumes you know how the machine operates, what it is used for and how it is constructed. So he uses the space and your time to tell you how much better the machine is than anything else and a lot more of baloney besides. Another thing all too frequently done when you do write for further information, is to refer the matter to the local representative, who may or may not follow the matter up. We have no kick to make on such practises, but when we write to the home office for specific information, we'd like to get it in the response, and then if the local representative wishes to call, it is all right with us. We like to see them as often as we can; we learn a lot from them, but there is no point in wasting their time and ours until we find out whether the particular machine will suit our purposes. Recently we had another of all too frequently repeated experiences. We got hold of a circular on a machine that seemed to fit a problem upon which we were working, but the circular told us nothing in a vast number of words. We wrote the manufacturer asking for specific data. Back came a letter saying the matter had been referred to their New York man who would call upon me presently, and nothing else. That was months ago. Perhaps this firm has lost a sale, because as matters stand even if the machine did work for the purpose we had in mind, we damn well wouldn't use it. It seems to us that a complete equipment file is a necessity in every plant and the plant manager is wise who browses through it frequently. But a file that doesn't tell you anything is worthless. It appears that every piece of literature on a machine should answer these questions: What is it for? Are there any other uses for it? How does it operate? How is it constructed? What does it look like? Much additional data can be given of course but if this information is lacking the folder or circular has failed to fulfill its purpose and is useless. A good rule for machine makers to follow is that a plant man cannot know as much about the manufacturer's machine as he does himself.



CRANE COLLOIDAL MIXER

PLANT UTILIZATION

A month or two ago we indulged in a pipe dream about the possibilities inherent in controlled cultivation of the more expensive crude drugs. We felt that by controlling the production of crude drugs, manufacturers who use them might well be able to increase yields very materially, and by hybridization, produce new extractives also. It appears that food canners have been thinking along similar lines. In *Food Industries* last month there appeared an intensely interesting article describing the amazing results obtained by Dr. W. F. Gericke and his associates in growing tomatoes, corn, potatoes, celery, tobacco and other plants under artificial conditions. Before describing some of these results, may we point out that Dr. Gericke's work is no longer purely experimental? Two West Coast canneries have built greenhouses to produce raw materials on a commercial scale. Dr. Gericke uses an original method. Instead of growing the plants in earth, he grows them in tanks containing solutions, possessing all the essential food elements required by particular plants, maintained at a constant temperature. These greenhouses contain large flat tanks or vats over which wire screening is tightly fastened. Over this wire screening peat moss is spread. The seeds are planted on the screens, and as they grow, their roots extend down into the solution in the tanks, the peat moss serving as a blanket to protect the roots from air. The solution in the tanks, containing the food elements needed for the plants, is kept at a more or less constant temperature by electric heating units. In the accompanying photographs we show Dr. Gericke (who is six feet tall) inspecting the results of his work. The tomato plants shown here are thirteen feet tall and produced yields of disease free, perfect fruit amounting to 217 *tons* of fruit per acre. When you compare this with the best commercial yields of truck farmers, which average six or seven tons per acre, there is much to be said for controlled agriculture, or "tank agriculture" as Dr. Gericke calls it. The other photograph shows a tobacco plant, which matured in four and a half months and is a mere eighteen feet high. It is said that Dr. Gericke is planning to establish tank greenhouses for the production of flowers. We believe Dr. Gericke's work shows what might be done with crude drugs produced under similar conditions.

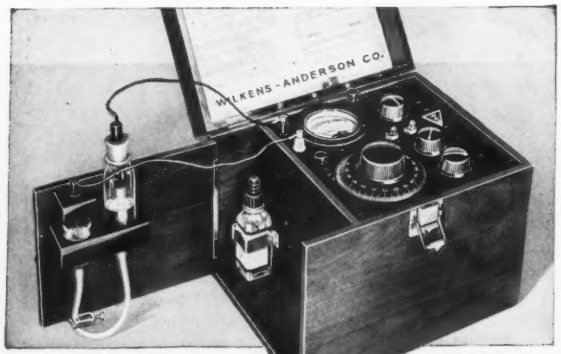
R. A. JONES CARTONER

Had a talk a few days ago with A. H. Ross of R. A. Jones Company about numerous improvements that have been made on the Jones Constant Motion Cartoner. While we are in Cincinnati we expect to get more data on the new machine and will pass it on next month.

pH Pays Dividends

STABILITY of many products is assured through pH control . . . the loss of a single batch more than offsetting the cost of testing equipment many times . . . not only in the cosmetic field but in serums and pharmaceuticals, etc.

COLEMAN pH Electrometer

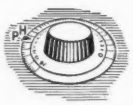


DIRECT READING PORTABLE

IS IT ACID OR ALKALINE?

POSITIVE, reproducible results are obtained, appealing alike to chemist and plant foremen . . . "push-button" testing . . . used in water or oily, colored, gaseous, creamy or viscous materials! The GLASS electrode is PREPARED and ready for use, as is the reference electrode.

Chemicals, dyes, cold creams or pharmaceuticals are simply placed in the cup, "null" point found on the needle and pH is read DIRECTLY on dial.



RUGGED and self-contained, with the exception of wash water for cleaning the GLASS electrode, the COLEMAN is but $125.00, for pH work . . . at the vat or in the laboratory!

Among the Users

Parke, Davis & Co.	Bristol-Myers Co.
Wm. S. Merrell Co.	Valentine Laboratories
Hilton Davis Co. (2)	Mathieson Alkali Works
Geo. A. Breon Co.	General Chemical Co.
Rit Products	Dow Chem. Co. (3)
The De Pree Co.	Joslin-Schmidt Corp.
S. E. Massengill Co.	Flint Eaton Co.

5 days' trial . . .

Send for Bulletin No. 3535 DC for description . . . or better, we will send the COLEMAN for 5-day FREE trial in your plant.

• DON'T WAIT FOR A RETURNED SHIPMENT!

LABORATORY SUPPLIES AND CHEMICALS

WILKENS-ANDERSON CO

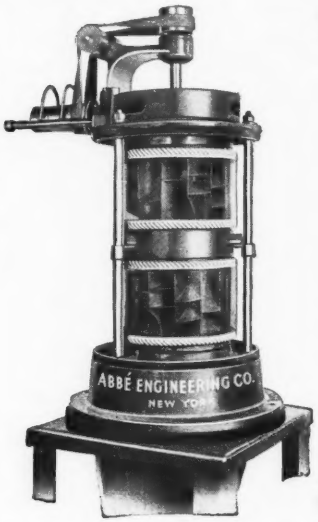
111 N. CANAL ST. CHICAGO ILL.

Let the Users Tell about

ABBÉ BLUTERGESS SIFTERS

Here are *actual statements* from some of the many satisfied drug and cosmetic manufacturers regarding Abbé Sifter performance on face and toilet powder, tooth, tablet and drug powders. Everyone of them replaced vibrating, oscillating or shaking machines with these results:

- **"Sift Kaolin, milk sugar, powdered drugs. Our costs have been reduced from ½c to 2½c per pound."**
- **"Powder does not require remix. Improvement in color dispersion."**
- **"Sifter is twice as fast and no noise or dust. It is very novel, neat, compact and efficient."**
- **"We have practically no 'tailings.' We get greater production and costs have been reduced. Machine has been 100% trouble-free."**
- **"Formerly used a shaker screen, also gyrator. Abbé Sifter gives less dust, less noise, greater speed, more uniform powder; more convenient and labor saving."**



TYPICAL USERS

Yardley
Harriet Hubbard Ayer
Joubert
Carlova
Bayer
Colgate
Grove Laboratories
Northam-Warren
Helena Rubinstein
Lady Esther
Bourjois
McKesson & Robbins
Pepsodent
Eli Lilly
Elizabeth Arden
Norwich Pharmacal Company

Showing working details of Abbé Blutergess Turbine Sifter. Centrifugal force drives material through ports of turbine over and through the screen. Steady feed; even distribution; low power; easily cleaned; no brushes. Units available in capacities from 50 to 5000 lb. per hour, sifting 6 to 350 mesh. Furnished with enclosed feed bowl and feed regulator, quick detachable casing and discharge hopper.

You, too, can profit by installing an Abbé Blutergess Sifter in your plant. Our laboratory will gladly test your product and prove our claims or—better still—let us send you a unit on a trial basis.

Abbé Engineering Co.

56 Church Street New York, N. Y.

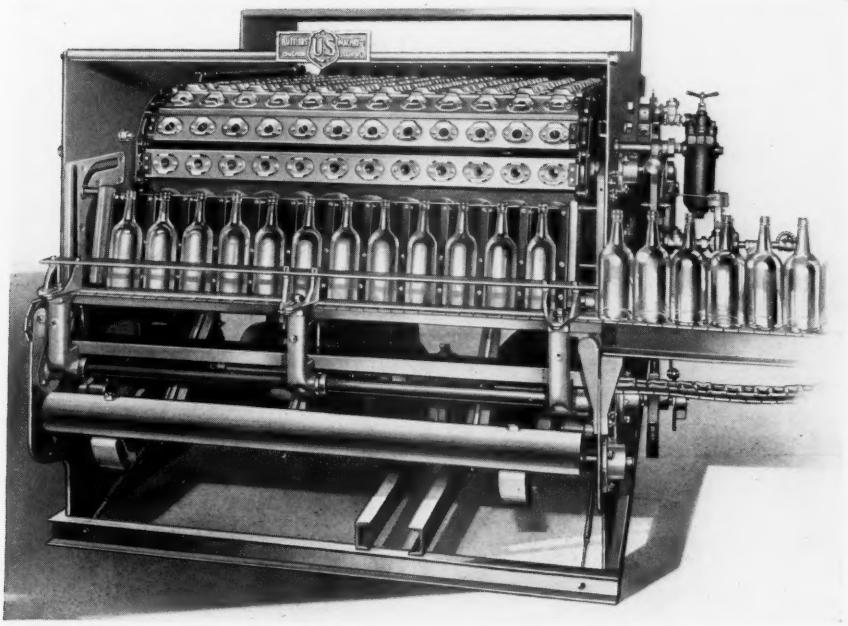
Speed -

Up to 180 containers per minute, delivered thoroughly washed and drained to the filling machine conveyor, can be accomplished with

the *Model* AWD

U. S. Automatic Washer & Drainer

It is a fully automatic washer for the discriminating bottler whose products require thoroughly cleaned—washed bottles.



Ideally adapted for operating in a fully automatic or semi-automatic bottling line, particularly where large production is required.

Will handle any size or shape of container. Fully automatic in operation. Simply place bottles or containers on feed chutes and they are automatically fed to cups on flights—carried in an inverted position to sprays, and are then delivered in an upright filling position to conveyor belt, where they ride to next operation.

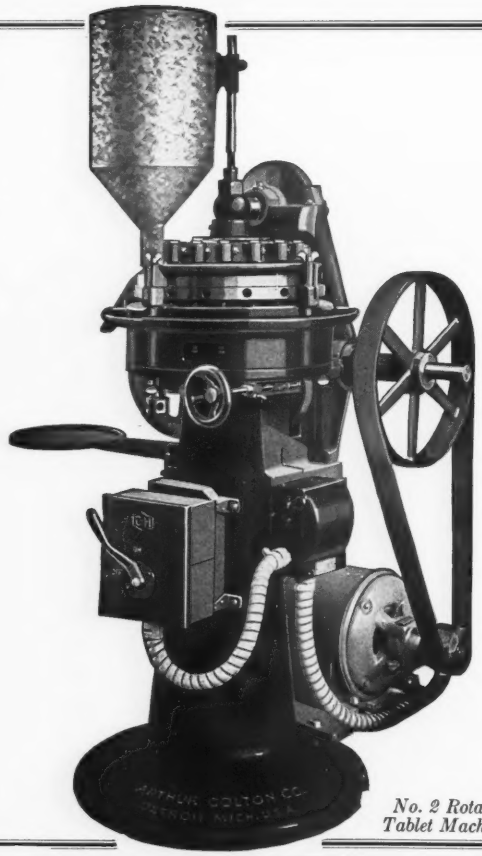
One set of cups on flights will handle a wide range of containers in a variety of shapes and sizes.

All main bearings are of the tapered roller type. All parts that come in contact with washing water are of bronze.

Bottling and Packaging Engineers

U. S. BOTTLERS MACHINERY CO.

4009-4027 No. Rockwell Street — Offices in all principal cities — Chicago, Illinois



No. 2 Rotary Tablet Machine

New and Improved!

We have no yearly models—but improvements and refinements are being constantly added to Colton machines.

There are over five hundred Colton Rotaries in use.

Superior design, sturdy construction and ease in operation have made this possible.

The No. 2 Rotary Tablet Machine has such desirable features as *positive pressure*, eliminating varying thicknesses of tablets; *hardened steel gear drive*, eliminating frequent replacement of worms used on other makes, and *sliding upper punch holders*, to hold the punches rigidly, enabling the manufacture of special shaped tablets most satisfactorily.

Write for Catalogs.

ARTHUR COLTON COMPANY

2620 East Jefferson Ave.
Detroit, Michigan

PROFITABLE REBUILT EQUIPMENT

FEATURING:

1—24" x 24" Shriver Aluminum Filter Press with aluminum Diaphragm Pump.
2—Colton Ball and Pill Machines.
3—Stokes and Colton single punch Tablet Machines.
4—Colton No. 2 and No. 3 Rotary Tablet Machines.
5—Stokes and Kiefer 72-spout Bottle Washers.
2—Stokes D Rotary Tablet Machines.
5—Day motor driven Dry Powder Mixers, 200, 600, 1000 and 2000 lbs.
5—Pony Mixers, 8, 15, 40 gallon, belt and motor driven.
15—Dough Mixers, 1 to 5 bbls. jacketed and plain.
2—Giant motor driven Cream Mixers, 30 and 80 qt.
10—Ointment Mills, 1 qt. to 10 gallons.
10—Copper Jacketed Kettles, 10 to 200 gallons.
3—Kiefer and Stokes multiple Filters.
5—Day and Stokes Powder Packers.
1—U. S. Bottlers 8-spout Vacuum Filler.
5—Stokes, Colton, Rodgers Tube Fillers, Closers, Crimpers.

Also a complete line of Kettles, Copper and Glass-lined Tanks, Mixers, Pumps, Filters, Percolators, etc.

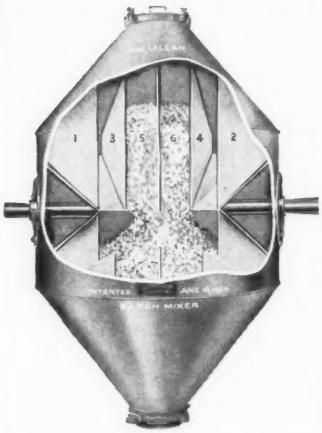
OUR WAREHOUSE IS ACCESSIBLY LOCATED IN NEW YORK CITY

"We buy from single items to complete plants."

STEIN—BRILL CORPORATION

Agent for George G. Rodgers Co.
187 Varick St. New York, N. Y.
Cable Address:—Bristen Tel. WAlker 5-6892-3-4

MacLELLAN BATCH MIXER



HOW IT OPERATES

The Drum is charged in an upright position, as it revolves the material is divided by the separators in six lots, when the Drum reaches 45 Deg. the material is discharged from Pockets 1 and 2 and mixed into the other end of the Drum. At 60 Deg. pockets 3 and 4 discharge and at 80 Deg. pockets 5 and 6 discharge making 12 complete separations and mixes every revolution, or 60 in five revolutions. ***Time:—ONE MINUTE.***

A SEVERE TEST

"In the manufacture of my product we use a 200-pound MacLellan Batch Mixer. It is in constant use. Its mixing principle is unbeatable, and it is an indispensable item of equipment, where thorough dry mixing is involved. The smallest proportion of one ingredient used in our mix at this time is *4½ ounces of strychnine arsenate in a 180-pound batch*, which is a ratio of 1 to 640. This must be very evenly distributed throughout the batch. Our satisfaction with your product when we have such a difficult mixing problem is a suitable recommendation for your mixer."

ANGLO AMERICAN MILL CORP.

INCORPORATED
OWENSBORO, KENTUCKY

Finer Texture **FACE POWDER AND ROUGE.....**

With the new, Dustless

MIKRO-PULVERIZER

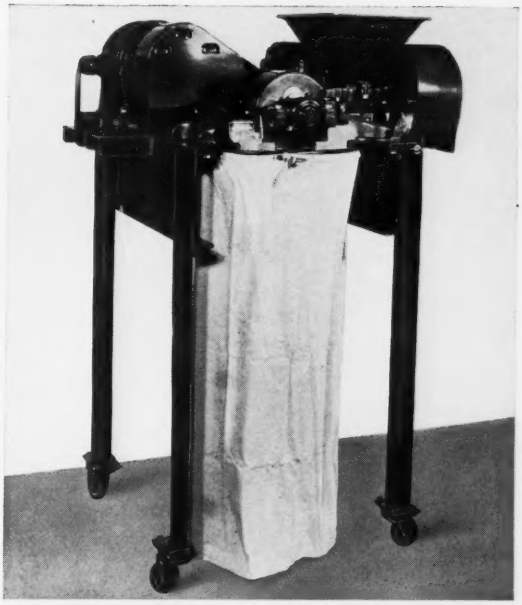
REG. U. S. PAT. OFF.

Eliminate Pre-Grinding! · Eliminate Sifting!

The one complete process for making thoroughly dispersed and completely blended cosmetic mixtures is this:

Roughly pre-mix the ingredients and run the mixture through a Mikro-Pulverizer. THAT'S ALL!

Reduces production costs
Produces a better product
Perfect batch matching



No. 1SH. Mikro-Pulverizer for small production work. Furnished complete with motors and drives and mounted on stand as shown (with or without casters) it is ready for operation—a complete miniature processing or pulverizing plant.

WRITE FOR DETAILS!

PULVERIZING MACHINERY COMPANY
107 VALLEY ROAD :: ROSELLE PARK, N. J.

REBUILT EQUIPMENT

PARTIAL LIST

1—J. L. Ferguson "Packomatic" Model MG Bond Filler & Weigher, with Sealer and Conveyor.
5—Day, Stokes & American single and double unit Powder Fillers.
3—Colton No. 2 Rotary 16 punch Tablet Machines, motor driven, up to ⅝" diameter.
2—Stokes Rotary "D" Tablet Machines, motor driven, up to 1" diameter.
5—Colton, Stokes and Mulford single punch Tablet Machines, up to 1½" diameter.
1—Colton No. 10 worm type Paste Filler.
1—Urie Universal piston type Tube and Jar Filler.
2—Colton No. 2 combination, Tube Closers & Clippers, each with clipless closure device, A.C. motors.
1—Colton No. 3 Tablet Stacker & Boxer.
1—Package Machinery Co. Tablet Filler.
Dry Powder Mixers, several with sifters, lab. size to 4000 lb. capacity
1—Patterson double Jar Mill, 2 gals. cap.
10—175 gal. Copper & Aluminum Jacketed Kettles.
5—Day Pony Mixer, 8, 15, and 40 gals. capacity.
1—U. S. Bottlers 22-spout Rotary Vacuum Bottle Filler, monel fitted, with conveyor.
2—Alsop Portable Vacuum Bottle Fillers.
2—McDonald "Weeks" Automatic Labelers.
5—Ermold, World and National semi-auto. Labelers.
1—Alsop Portable Pressure Filter.
1—Karl Kiefer No. 1 Disc Filter, 10 plates, 6" diameter.
1—Star 10 plate Filter, 12" diameter, pump and motor.

MISCELLANEOUS—Kettles, Drug Mills, Ointment Mills, Pulverizers, Grinders, Sifters, Screens, Colloid Mills, Filters, Filter Presses, Coating Pans, Tanks, Stills, Agitators, Pumps, Boilers, etc. Send for complete bulletin.

What have you for sale? Send us a list.

Consolidated Products Company, Inc.
20-21 Park Row Telephone: Barclay 7-0600 New York, N. Y.
Warehouse and Shops: 335 Doremus Avenue, Newark, N. J.

Price $9.75

PATENT APPLIED FOR

THE ERTEL CAPPER
• BRINGS PROFIT •
WITH EVERY MOTION

Cap! Cap! Cap! . . . Profit! Profit! Profit! . . . A bottle is capped with every downward stroke. Bottle after bottle goes on its way without wrist motion . . . without fatigue . . . without operating cost.

This capper is geared to eliminate leakers and yet to make bottle opening easy. No operator experience necessary. Absolutely fool proof.

No wonder orders pour in like returns on election night! Each capper comes complete with one chuck. Send sample of cap with order for size.

MANUFACTURERS OF

Asbestos Disk Filters, Neutral Asbestos Filter Sheets, Pumps, Portable Mixers, Glass-Lined Tanks, Jacketed Tanks, Portable and Semi-Automatic Vacuum Bottle Fillers, Alleghany Stainless Steel Tanks, Capping Equipment.

ERTEL ENGINEERING CORPORATION
Dept. B, 120 E. 16 St. New York, N. Y.

COMPARE
QUALITY
PRICE

APPLICATORS

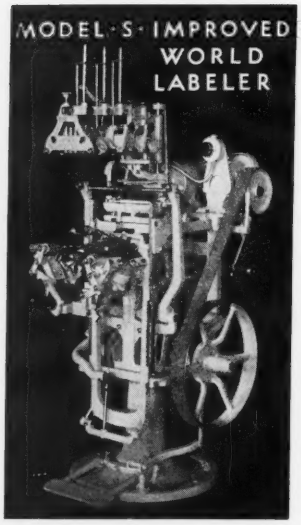
Attractive and practical applicators with a specially attached sponge dauber that will not pull out. Furnished with or without bottles. An ideal closure and applicator for every type of liquid preparation.

Let us fit one to your bottle. No obligation

Glass
PRODUCTS
COMPANY
VINELAND
N.J.

New York — L. A. Barber, 43 S. Portland Ave., Brooklyn, N. Y.
Atlanta, Ga. — Warren M. Curry, 2895 Peachtree St.
Chicago, Ill. — E. Marx & Co., 308 W. Washington St.
St. Louis, Mo. — L. L. Whitlow, 202 S. Main St.
San Francisco, Cal. — Geo. Luckenbach, 241 Phelan Bldg.
Seattle, Wash. — Container Sales Co., 329 Republic Bldg.

MODEL S IMPROVED WORLD LABELER



The most flexible labeling machine. Easily equipped for labeling any size bottle or jar. Many exclusive mechanical features, developed by manufacturing experience of more than 35 years.

Economic Machinery Company
WORCESTER, MASS.
Makers of complete line of automatic and semi-automatic labelers.

MODERNIZE *with*

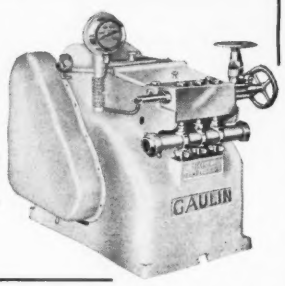
MANTON-GAULIN

Two-Stage Homogenizer

No plant is completely equipped without one of our homogenizers They eliminate compounding troubles and vastly improve the quality and appearance of your products Many oils and medicines are made more effective therapeutically and much more palatable by homogenization.

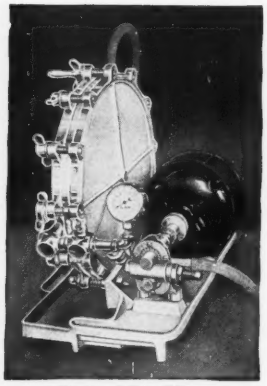
Creams, ointments and liquid and semi-solid emulsions of all kinds are made more stable and more appealing in appearance. Suspensions such as milk of magnesia are made more stable. Medicines, solutions and other liquids are made clearer and more uniform.

If you want to make fine products, make them with an M-G Two-Stage Homogenizer. Many sizes available.



The Manton-Gaulin Manufacturing Co., Inc.
EVERETT :: MASS.

Have Your Perfumes "*SEX APPEAL*"?



Hy-Speed Disc Filters from 2 to 100 Discs

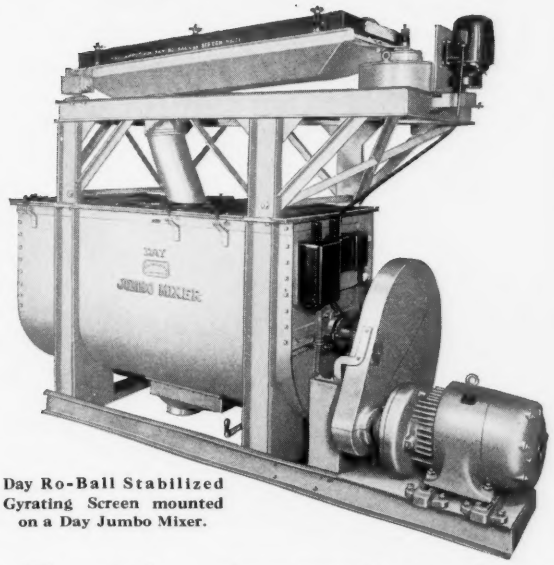
Do they attract the "Fair Sex" with their Sparkling Brilliance?

Do your Lotions and Astringents have that Cool, Crystal Clear appearance that looks so inviting and refreshing these hot days?

If not, you are losing sales. But you can easily remedy this — by using a *Hy-Speed* Disc Filter. The results will delight you. We'll be glad to send you one on trial. No obligation to you, of course.

ALSOP ENGINEERING CORP., New York

DAY *SIFTING and MIXING EQUIPMENT..*



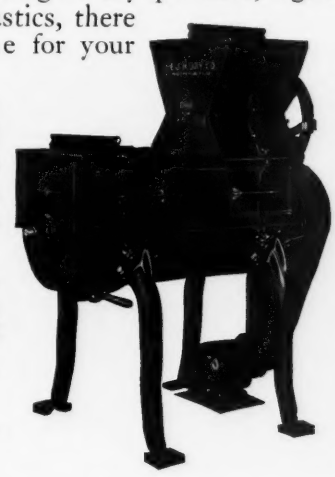
Day Ro-Ball Stabilized Gyrating Screen mounted on a Day Jumbo Mixer.

The unit shown above provides a continuous sifting operation on dry powder, producing 1500 pounds every eight minutes. This unit is free from vibration, is compact in design, sturdy in construction, and uses a minimum of power.

The Day Company has been manufacturing Sifting and Mixing equipment for over a half century, and no matter what your sifting and mixing problem may be, whether in the incorporation and blending of dry powders, light paste or heavy plastics, there is a Day machine for your purpose.

Competent Day Engineers will gladly cooperate with you in working out your problems.

Write for full information, or send specifications of your requirements.



Day "B" Hunter Sifter & Mixer (200 lb. capacity)

The J. H. Day Company

Factories and Principal Offices

Cincinnati Ohio

Crystal-Clear Liquids in SPARKLING BOTTLES

The clarity of your liquids is the consumer's first test of its quality. Don't let cloud or sediment—dirt from half-cleaned bottles—raise a doubt in his mind.

KIEFER FILTERS

Will make your products perfectly clear. That's why most bottlers use them.

THE DUO-BLO BOTTLE CLEANER

A new, quick, thorough method of cleaning bottles. It takes ALL the dirt out of ALL the bottles with DRY FILTERED air. Cleans two bottles at a time. One girl can easily handle up to 40 bottles a minute.

Far superior to vacuum cleaning because 60 to 80 pounds of compressed air will really do the job—the positive way of cleaning bottles!

We also make a complete line of machines for filling, closing and conveying bottles and jars.

THE KARL KIEFER MACHINE CO.

CINCINNATI, O.

A. J. STERLING
225 Broadway, Room 1209
New York City

M. C. FINN
10 High St.
Boston

T. C. KELLY
222 W. Adams St.
Chicago

P. JORGENSEN
311 California St.
San Francisco

OF INTEREST TO HAIR GOODS MANUFACTURERS

To Bring Back Luster and Natural Color to Dull White Hair

PRIMAL SILVER WHITE

Can be used on live or dead hair. Amount to be used (concentration of solution) depends on absorption qualities of hair. Therefore, a test should be made on an inconspicuous strand of hair.

For thick hair use two parts Silver White one part water.

For soft thin hair one part Silver White one part water.

Hair is washed, rinsed, and solution applied and left on for twenty minutes. Hair is then dried.

For dead hair or wigs: After cleaning, place hair in bath of one part Silver White and six parts water for twenty minutes. Then wash in warm water and dry.

Strongly bleached hair takes one-half litre water and one tablespoonful of Silver White.

Unbleached hair takes even proportions of Silver White and water.

AROSOL

One of the World's leading perfumers has written to us as follows regarding AROSOL.

AROSOL "Agfa"

"I have duly examined the above substance in its application to the Perfumery Industry and report as follows:

1. Arosol was found to be miscible with an equal volume of 60% Ethyl or Isopropyl Alcohol.

Five volumes of Arosol were miscible with 10 volumes of 50% Isopropyl Alcohol, and

Seven volumes of Arosol were miscible with 10 volumes of 50% Ethyl Alcohol.

2. 10% Arosol was added to the following good quality artificial flower oils:

Rose, Violet, Carnation, Neroli, Narcissus, Jasmin, and Lilac.

One cc. of each was placed on inodorous absorbent paper and exposed for 14 days to ordinary atmospheric conditions. One cc. of each compound without Arosol was treated in a similar manner as a check. At the end of the 14th day these were compared, and in each case the compound containing 10% of Arosol was found to still retain *all* the odoriferous characteristics of the original whereas the check samples had lost their soft evenness of odour and particular ingredients were readily identified.

Similar tests were made with Lemon, Bergamot, Sweet Orange, and Lavender Oils.

The two former gave better results than the two latter.

3. One per cent. of Lemon Oil was milled into a very cheap soap base as a check against a similar percentage containing this oil with Arosol in the proportion of 9 to 1. After 14 days the odour of the soap containing the lemon oil only showed distinct signs of the resinification of the oil, whereas the other retained the unimpaired fresh lemon fragrance.

A Cologne compound as follows was treated in a similar manner with satisfactory results:

60 cc. Lemon Oil; 60 cc. Orange Oil; 60 cc. Bergamot Oil; 60 cc. Para Petitgrain Oil; 30 cc. Methyl Anthranilate; 30 cc. Arosol.

4. Ten grams of cheap milling base were dissolved in 30 ccs. of Ethyl Alcohol and made slightly alkaline with NAOH. 10 ccs. of a one per cent. solution of the following compounded oils were added:

3 Lemon; 3 Orange; 3 Bergamot; 1 Arosol; = 10.

The flask was connected with a reflux condenser and placed in a water bath and heated for two hours, a check being made with identical substances excepting Arosol. At the end of two hours all odour had been destroyed in the check experiment while the sample containing Arosol was still sweetly fragrant.

To sum up, therefore, I am of the opinion that AROSOL answers all the most stringent tests for a first class Fixative by reason of its:

1. Unusual power of retarding evaporation and thus retaining the odoriferous characteristics of a perfume after prolonged exposure.
2. Stability in the presence of alkalis, an indispensable feature to the Soap Perfumer.
3. Miscibility—of importance to the maker of dilute alcohol perfumes.
4. Preservative action upon oils prone to resinification.
5. Slightly balsamic odor and thus useful in any perfume."

NOTE: Copy of letter on request.

Samples and quotations on request.

Agfa Aromatics Division

GENERAL DRUG COMPANY

170 Varick Street, New York City

1220 W. Madison Street . . . Chicago, Ill. 907 Elliott Street . . . . Windsor, Ont.

Perfumers Shelf

Lavender for Powder

The increased popularity of Lavender scents has led the writer of your Shelf to discuss the importance of building well balanced Lavender compositions, and it maybe said in this regard that this beautiful aroma is rather a delicate one to reproduce, although the perfumer is exceptionally fortunate in having several different grades of oil from the flower which is more reasonable in price than many of our other flower oils.

Most important to be considered in this regard is the quality of the oil Lavender Flower to be used since the bulk of nearly every Lavender composition consists mainly of the flower oil itself. France is generally considered to be the main source of this material and the oil from this source is recognized to be the type of oil necessary in building the perfume. English types differ somewhat from the French, the oil being much higher in price and the quantity of oil available is exceedingly small. It is generally believed that the soil conditions have much to do with this difference in odor value and at present there are many experiments being conducted by the flower growers with various species and types in an effort to obtain something unusual.

The quality most generally used is one having an ester value of 36%, but this usually depends upon the type of product in which it is to be used. One of the most difficult achievements in the perfume line is the perfuming of the Lavender Powder and naturally the selection of the oil of Lavender, as mentioned above, is the first consideration.

It is extremely important to note, however, that Lavender by itself will not retain its odor in talc for any definite length of time without the application of certain other ingredients which produce fixative characteristics making it possible to hold the true odor of the flower within the powder base. There are many items which can be used in this respect which will give good results, mainly such products as benzoin, styrax and balsam peru. These three valuable fixative agents must be used carefully, especially in the case of styrax, but it will be found with experimentation that they will blend exceptionally well with a good quality Lavender and that the retention of the perfume oil within the powder will be increased over a longer period of time. Of course, these three products alone will not develop the well rounded Lavender scent but such materials as oil bois de rose femelle, musk ketone, and coumarin will greatly enhance the fixative properties and also blend exceptionally well. The perfumer can make several modifications depending upon the type which he wishes to make and also to arrive at a set price by using small quantities of lavender aspic, geranium bourbon, sage clary, cloves, bergamot and petitgrain. A small amount of oleoresin Oakmoss also is valuable adjuncts to this formula but care must be taken that the other materials in the formula are well balanced permitting the odor of lavender flowers to slightly predominate.

Another important consideration in any combination which may be made is that none of the materials used should smart the skin and also any materials which cause discoloration should be carefully avoided. The incorporation of the perfume oil in the powder, is also an important factor in maintaining the lasting quality of the odor.

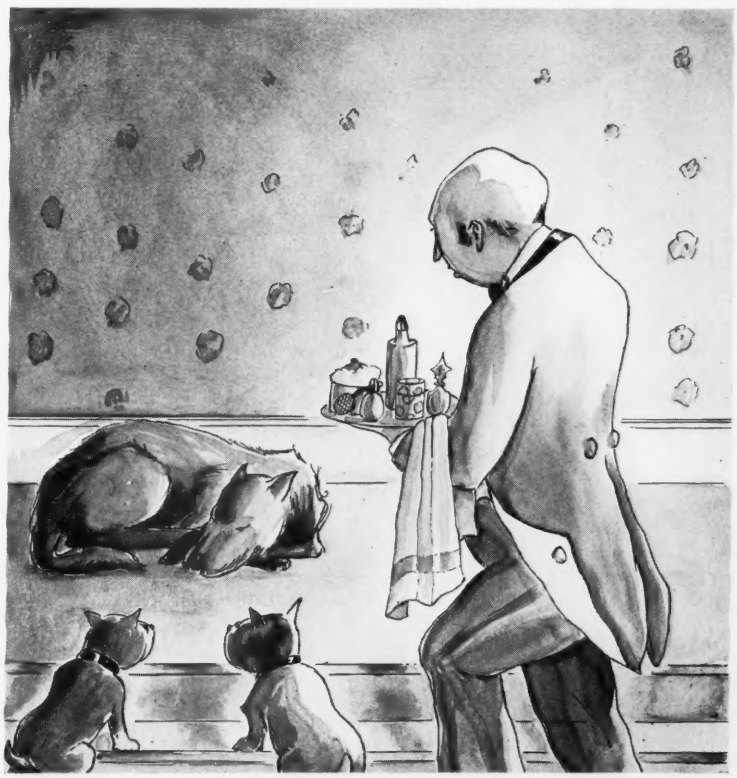
In the cheaper grades of powder, the oil is usually mixed directly with the talc and since the talc molecule is not porous, the perfume oil adheres only to the outside and in time the odor will disappear. In working with such a delicate product as Lavender, it is best to incorporate the perfume oil by using a small quantity of magnesium carbonate or some other vehicle known to have a porous molecule.

It is hoped that the above suggestions will be of added help to the perfumer who is interested in developing a powder for his line and should additional help be required in the formulation of a product of this kind, we will be glad to be of further assistance upon request.

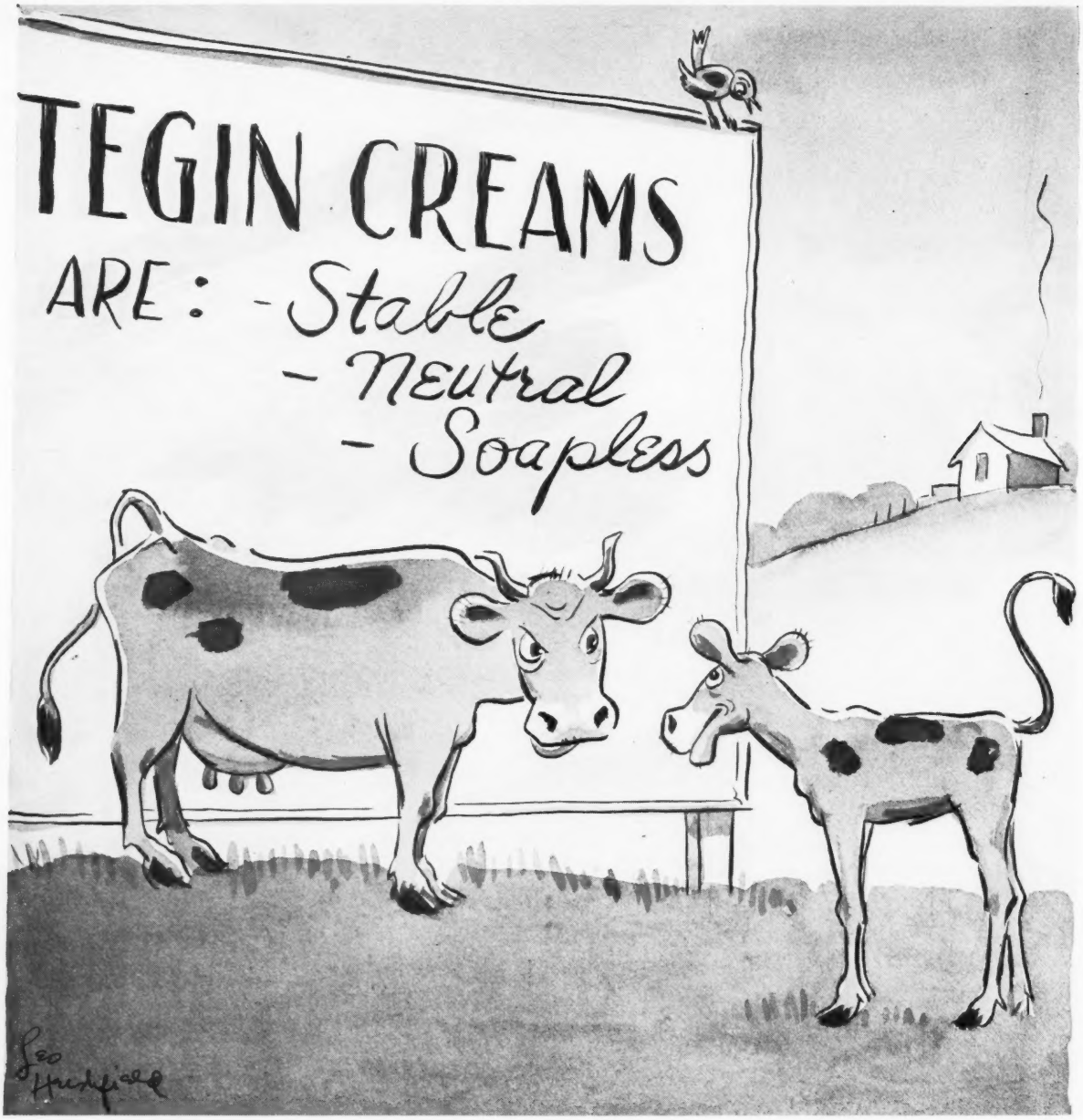
The Canine Market

Can this be Fido? In polite canine society nowadays, there is a new air. The really exclusive dog must have his cosmetics. Although going on quietly for some time, it remained for "Leash, the

(*Continued on page 117*)



"Come, sir, it's the lilac bath we're 'avin' this morning."



"Looks like you ought to give up, Maw. Tegin gives creams that don't separate."

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The COMPOUNDER'S CORNER

Emulsification

The technique of emulsification deals with the preparation of homogeneous mixtures of immiscible liquids so that they will not separate to any great extent on standing. Emulsions may be prepared by either or both of two general methods: the size of the particles of one of the liquids may be reduced by an emulsifying machine (colloid mill or homogenizer) or the globules may be covered with an emulsifying agent and thus prevented from agglomerating into large droplets again. Each method has its limitations: the first does not allow the preparation of concentrated emulsions while the second does not necessarily lead to an emulsion with small and uniform particles.

Some emulsifying agents have been known from ancient times, others are products of comparatively recent investigation. Among the emulsifiers are agar-agar, quince seed, tragacanth, carragheen, gum arabic, alkalies, starches, resins, gelatin, etc. The most common, however, is soap. Along with the usual alkali salts of higher fatty acids we can include the triethanolamine compounds which deserve special mention. They have very strong emulsifying power and form stable preparations with many oils. Creams produced with these soaps may be washed off with water since they are of the oil-in-water type.

Cholesterins as emulsifiers include oxy-, meta- and iso-cholesterin. These substances, to the extent of 5% in petrolatum, give lanolin absorption bases which in turn lead to water-in-oil emulsions.

Still other products are the sapamin salts and fatty alcohol sulfates. The glyceryl stearate absorption bases consist of monoglyceryl stearate with a certain amount of free stearin and an emulsifying agent such as potassium stearate. In fact, this type of preparation is an example of a continually growing class of cream bases. The latter contain an emulsifying agent such as soap or one of its substitutes and a "mechanical emulsifier" like monoglyceryl stearate. The two ingredients mutually supplement each other in such a way that water, and other materials are taken up far more effectively than by either ingredient alone.

A different type of product is methylcellulose which has high emulsifying power and in general acts in the same way as the mucilages. On the other hand, it will not ferment, is stable to heat, cold, acids, bases, is neutral and non-poisonous. Mucilage like that from tragacanth is produced when boiling water is poured over methyl-cellulose and the mixture allowed to cool. The mucilage is compatible with most salts, dilute acids and alkalies but is coagulated by tannins, and phenol. Emulsions with insoluble fats, oils, waxes and resins are very stable. Homogenization further increases the stability of the emulsions.

Pectins are hemi-celluloses and combine the properties of emulsifiers and gel-producers. They are precipitated by excess alcohol or mineral salts, and special care must be observed to prevent syneresis (separation of liquid). Pectins are generally valuable, in addition, because of their stability to acids and they are compatible with silicic acid gel used in some of the modern dentifrices.

Incompatibility of Acacia and Amidopyrine

A mixture containing amidopyrine, sodium and potassium bromides, infusion of digitalis, sodium benzoate and acacia mucilage developed a violet, followed by a yellow color on standing. If the enzymes of the gum were destroyed by heating on the water bath for half an hour, the color did not develop. Although the coloration was due to the oxidation of the amidopyrine, the digitalis glycosides might also be destroyed. P. Z.

Universal Indicator for pH

A two-solution method of determining the pH value of a liquid by means of a universal indicator has been devised. One solution is for determining the pH of acid solutions over a pH range from 1 to 7 while the other covers the alkaline range from pH 7 to 14.

The first solution consists of

Thymol Blue	0.035 gram
Tropeolin OO	0.020 "
Bromphenol Blue	0.010 "
Bromcresol Green	0.030 "
Bromcresol Blue	0.040 "
Alcohol 50%	100 cc.

This solution shows the following characteristic colors: pH 1, cinnabar red; pH 2, orange yellow; pH 3, yellow; pH 4, yellowish green; pH 5, green; pH 6, greenish blue; pH 7, ultramarine.

The second indicator, for use with alkaline solutions, contains

Neutral Red	0.035 gram
Thymol Blue	0.015 "
Thymolphthalein	0.025 "
Nitamine	0.100 "
m-Nitrophenol	0.060 "
Alcohol 50%	100 cc.

Colors for this solution are pH 7, cinnabar red; pH 8, yellow; pH 9, yellowish grey; pH 10, greyish green; pH 11, greyish blue; pH 12, greyish violet; pH 13, brownish violet. J. V. Dubsky and A. Langer, Chemicky Obzor.

"Do you think the boys will notice that my finger-nails and toe-nails match?"

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Wetting and Dispersing Agents

Wetting and dispersing agents have come into great prominence in recent years, mainly in the textile and textile processing industry. Their value is definite since they perform services that were not previously possible. Among these is the rapid and complete wetting of textile materials to facilitate dyeing and other processing, and dispersion of dyes to promote easy and rapid solution.

These materials have not yet, however, been fully recognized in the cosmetic industry. Some, such as the fatty alcohol sulfates and the sulfated triethanolamine soaps, have been suggested for cosmetic use and have enjoyed a fair degree of success, but there are now available a number of other products which may better serve a special purpose. Wetting agents, through surface tension lowering powers, should be useful in general wherever emulsifying agents are required; they should be satisfactory in formulating neutral shampoos and dentifrices; they could be put into shaving preparations. Dispersing agents are primarily useful in keeping finely divided particles in dispersed form and in preventing them from forming lumps, although other fields of application may be suggested when research is further advanced.

Wetting and dispersing agents are sulfo, amino and other derivatives of aliphatic and aromatic compounds; it is difficult to characterize them more accurately since they may be of such widely differing constitution.

Daxad Dispersing Agents are made by the Dewey and Almy Chemical Company, Cambridge, Mass. They are various polymerized organic salts of sulfonic acids of the aryl-alkyl type. They are practically neutral and are active in both alkaline and acid media. They will often stabilize emulsions against breakage by boiling, freezing or the addition of acids or salts. Suspensions containing these dispersing agents can be more efficiently ground in ball or tube mills and the slurries are quite fluid.

Alphasol Wetting Agents are manufactured and sold by the American Cyanamid and Chemical Corporation, New York City. The OT type looks and feels like paraffin, the MA is hard, white and brittle and can easily be powdered while the OS is a yellowish powder. The OT is soluble to the extent of 1 part in 100 parts of water; the MA will dissolve to the extent of 40 grams per 100 cc. of water while the OS type dissolves to the extent of 30 parts per hundred. These are all clear, colorless solutions. In addition, the OT and MA dissolve easily in the usual organic solvents such as alcohols, ethers, coal tar hydrocarbons, petroleum hydrocarbons, carbon tetrachloride and other chlorinated solvents, lacquer solvents, esters and vegetable, animal and mineral oils. One tenth per cent. of these materials reduces the surface tension of water to about one-half of the original value. The wetting agents are effective emulsifiers, being active in concentrations as low as one-twentieth or one-one hundredth of one per cent. Solutions of the Alphasols are neutral to slightly acid. They are slightly hydrolyzed by strong alkalies, slightly affected by strong mineral acids and practically unaffected by organic acids or moderate concentrations of electrolytes.

Tergitols are made by the Carbide and Carbon Chemicals Corporation. They are solutions of sodium sulfates of higher synthetic alcohols and are highly effective wetting agents for speeding the penetration of an aqueous solution into porous media, such as cloth, paper, leather, etc. They are soluble in mildly acid or alkaline solutions and are neutral and non-oxidizing. They form soluble lime salts, and are stable in peroxide and hypochlorite bleaching solutions. Tergitol No. 7 is a wetting agent which is used in very low concentration and is stable in the presence of lime salts, mild acids and alkalies. Tergitol No. 4 is generally similar to the No. 7 product, but its wetting action is strongly acid or strongly alkaline media is superior. It is less active in neutral solutions. Tergitol No. 08 is effective in strong alkaline or acid solutions and retains its activity even in 15% caustic soda solutions.

E. I. duPont de Nemours & Co., Inc., of Wilmington, Delaware has available a series of booklets describing a very extensive series of wetting agents and special chemicals. The wetting agents are for the most part variations of sulfate fatty alcohols and their effectiveness in the textile industry is especially emphasized. The Duponol series is suggested for cosmetic use. Duponol ME Dry is the lowest priced of the series, Duponol WA Flakes is more concentrated and higher in price while the Duponol WA Pure is a special product containing less than 0.1 per cent. sodium chloride and sulfate and lead less than 0.001 per cent.

Nacconols are described in a booklet issued by the National Aniline & Chemical Company, Inc., of New York. These are also sulfonated or sulfated compounds and are effective wetting agents in the presence of acids, alkalies, lime salts, etc. The Nacconol SF is suggested for use in soapless, non-alkaline, lathering shampoos.

Dentifrice

A tooth paste contains as a cleansing agent a preferably neutral salt of tartaric, citric, or malic acid and is free from substances which could give off carbon dioxide. The paste may also contain cellulose or wood which has been ground into the colloidal state, an inorganic colloid such as silicic acid in the form of glycerogel and various other substances such as boric acid, sodium chloride, potassium chlorate, borax, chlorides, phosphates thiocyanates and foaming agents. The paste is preferably compounded so as to have a pH value between 6.3 and 7.8 and may be ground into the colloidal state at a temperature not exceeding 70° C. Silicic acid in the form of glycerogel is prepared by adding glycerine to the hydrogel with or without subsequent evaporation of part of the water. Brit. Pat. 437,055.

Black Pigment

"Colloidal Black" consists of a base of colloidal carbon intensified with vegetable and aniline food colors. It is said to be the most completely and intensely black food color prepared and should eliminate difficulties due to grittiness, off-color, moisture attraction or graining. From 2 to 5 ounces to 100 lbs. are ordinarily sufficient to impart a jet black color to the product, depending upon its transparency. Its use is recommended for mascara, cough drops, throat lozenges, breath tablets, licorice-flavored medicinals, etc. A. A. Lund & Associates, New York City.

Analytical Solutions

The Fixanal preparations represent a unique method of preparing standard solutions for analytical purposes without the use of an analytical balance and with the minimum of fuss and trouble. The exact amount of the chemical necessary to prepare one liter of the standard solution of desired normality is contained in a special ampoule. With the accessories supplied, the chemical is quantitatively transferred to a volumetric flask and water added to make the proper volume. Solutions made in this way are accurate within one-tenth of one per cent, which is adequate for almost all purposes.

Antirancidol

Decomposition of vegetable and animal products in cosmetic preparations can take place in either or both of two ways. Bacterial action will cause a breakdown of the oil or fat, but this can be overcome by the use of a suitable preservative. The other type of action is oxidation and is often overlooked. In this case, the compound or the free fatty acid take up oxygen and are transformed into typically rancid materials. Antioxidants can overcome this difficulty and are useful in surprisingly small amounts.

Antirancidol is being offered as an antioxidant by R. F. Revson Co., New York. It is a light cream-colored powder with an aromatic odor which does not affect the odor of the finished product. Although it is not suggested for use in food preparations, the product is non-toxic and non-irritating. It will dissolve either in water or oils in sufficient amounts to be effective. From 0.015 to 0.03 per cent. of Antirancidol on the weight of the finished product is generally adequate for complete protection against oxidation. Tests have shown it to be a good insurance against the development of rancidity.

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ADVANCING THERAPY

Ergonovine—Last year the isolation of a new alkaloid from ergot was reported within a relatively short period from four different laboratories, two in the United States, one in England and one in Switzerland. The new substance was found in each case to be different in its properties from the previous known alkaloids of ergot; its oxytocic effects were much more prompt and more lasting than those of ergotoxine or ergotamine and the required dosage was smaller. Some discrepancies in the reported chemical and physical properties of the material isolated by the different investigators led to doubt as to the identity of the four products; four names were proposed, ergometrine (Dudley and Moir), ergotocin (Kharasch and Legault), ergobasine (Stoll and Burckhardt) and ergostetrine (Thompson). Owing to the confusion entailed by the doubt as to the identity of the four products so designated, workers in the four laboratories agreed to exchange specimens and to compare the various products. Kharasch, King (acting for the late Dr. Dudley), Stoll and Thompson have now reported that their "comparisons of the melting points and mixed melting points of the four alkaloids and of certain of their salts, and of their optical activities in different solvents in cases where sufficient material was available, leave no doubt that the material obtained in the four different laboratories was the same substance, and that the four names given to it are synonyms." The Council on Pharmacy and Chemistry has adopted a new nonproprietary name for this alkaloid "ergonovine." The new term was chosen instead of one of those already proposed because of the difficulty of determining priority and because of possible conflict of the other names with the policy of the Council governing nomenclature. The agreement among the investigators concerned as to the identity of the alkaloid and the adoption of a single name to replace the four previously in use (and others employed in addition by commercial firms) should now prevent further confusion.

Gargles—Dr. Julius Kaunitz, in a note in the Journal of the American Medical Association, takes exception to the ultrascientific and apparently worthless methods of investigation that prove gargling to be ineffective. Snow and Stern conservatively suggested that the gargle did not reach even the anterior fauces (front of the throat). Haase, using the same technic in which the subject gargles with a thin barium sulfate suspension before the roentgenogram is made, concluded that the gargle reached the palatine arch and the upper tonsillar pole but does not reach the tonsils themselves or the posterior pharyngeal wall. According to Dr. Kaunitz, it is only necessary to look into the throat of a patient who has just gargled with a thick suspension of bismuth subcarbonate. Every part of the mouth and throat, including the tonsils, posterior pharynx and even the piriform recess is coated.

Antiseptic from Camphor and Boric Acid—The intimate mixture of camphor with an equal weight of boric acid gives a product having remarkable antiseptic properties. Used in cutaneous disorders, it effectively replaces materials now commonly in use. The mixture has been proven effective in the treatment of eczema, infected wounds, inflammations, etc. G. Ganino, Boll. Chim. Farm.

Colloidal Phenolphthalein—Colloidal phenolphthalein in solid form is prepared by adding 2.15 g. of phenolphthalein dissolved in normal NaOH to 5.0 g. of gelatin dissolved in 50 cc. of distilled water. A stream of carbon dioxide gas is passed over the surface of the mixture until the color is completely discharged. Citric acid is then added to a pH of 5.5. The resulting mixture is spread in a thin sheet on glass plates and dried at room temperature. Colloidal phenolphthalein gives a pink color with sodium bicarbonate solution, is more soluble than crystalline phenolphthalein at the hydrogen ion concentrations prevailing in the human body, has a bitter taste, may pass through the stomach and is somewhat more active in producing bowel evacuation than is the crystalline form. B. Fantus and J. M. Dyniewicz, Am. J. Digestive Diseases Nutrition.

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New Sources of Vitamin A—Dr. Peter G. Mar recently read a paper before the Henry Lester Institute of Medical Research in Shanghai reviewing the present knowledge of vitamin A and pointed out that night blindness is a well defined condition described in old Chinese medicine and indicated that it has a nutritional basis. Since vitamin A speedily cures this condition, Dr. Mar undertook an investigation of old Chinese remedies recommended, with interesting results regarding their vitamin A content and carotenoid values. Some of the 146 remedies so studied had low values, while feces of the flying fox, bat and sparrow, which are still much used in China, yielded very high results. In the list were 22 inorganic remedies which yielded various results. Sixty-five vegetable substances were examined, 20 of which were found to have a higher value, 8 an equal value and 37 a lower value than cod liver oil. Atractylis gave values about 18 times that of cod liver oil. Coltsfoot, broom, pink, yam and ink plant all had high values.

Influence of Vitamin C on Blood Picture—Eufinger and Gaehtgens, after pointing out that vitamin C has been found helpful in various forms of capillary hemorrhages and in gynecologic bleedings, call attention to an observation indicating that vitamin C also exerts a favorable influence on the white blood picture. They describe the clinical history of a woman, aged 35, who had a myeloid leukemia. By means of the intravenous injection of large doses of cevitaminic acid (100 mg. twice daily for 10 days) it proved possible nearly to normalize the white blood picture in a comparatively short time and also to exert a favorable influence on the red blood picture. The woman recovered and was able to work again. Various factors seem to indicate that an action on the bone marrow is chiefly responsible for the efficacy of this treatment.

Vitamin C and Infantile Paralysis—Dr. Claus W. Jungblut, Bacteriologist in the College of Physicians and Surgeons, has presented a preliminary report which declares that researches now being pursued at Columbia University point to "a strong probability that vitamin C, when injected in proper doses, possesses distinct therapeutic power in experimental poliomyelitis."

By injecting small, carefully determined doses of vitamin C under the skin of monkeys, beginning on the day on which the animals were infected with infantile paralysis, the Columbia scientists found that the animals were rendered immune to the disease. The treatment yielded the unusual discovery that a small dose provided complete protection, while larger doses did not. The experiment with monkeys followed the earlier discovery that when very small amounts of vitamin C are added to infantile paralysis virus in the test tube, the virus loses its power to produce the disease.

Wheat Germ Oil (Vitamin E)—Watson prescribed wheat germ oil to sixty-five patients in whom spontaneous abortions, threatened abortions or involuntary sterility constituted the principal abnormality. There were four groups of patients. In the first were pregnant women who had previously experienced two or more spontaneous abortions; in the second group the women had had one spontaneous abortion; the third group included pregnant women with abortion threatened while the fourth group contained women who sought medical advice because of failure to become pregnant. Of eleven patients who had sustained from three to fifteen spontaneous abortions prior to the use of wheat germ oil, nine went to term and were delivered of healthy living children. Six of the patients under this regimen completed a pregnancy for the first time. Of the seventeen wheat germ oil treated patients, each of whom had had two spontaneous abortions, twelve gave birth to healthy living children after the use of the oil. Of nine treated patients, each of whom had experienced one previous spontaneous abortion, eight gave birth to healthy, living children. Fifteen patients were treated for the symptoms of threatened abortion. In eleven of these the pregnancies continued uninterruptedly to terminate in natural deliveries. In the fourth group, containing women who wished to become pregnant, the use of vitamin E was ineffective.

Treatment of Erysipelas—Meyer-Heine and Huguenin state that since the work of Mietzsch and Klarer in 1932 it has been shown that 4-sulfamido-2, 4-diaminobenzene has a remarkable action on experimental streptococcic infections. They report the action of this substance on a considerable number of patients having erysipelas of the face and of the limbs. In the majority of instances the subsidence of general symptoms and local signs occurred rapidly. This was especially true of erysipelas of the face. There were some failures but no complications of importance. In general, the hydrochloride of sulfamido-chrysoidine seems to bring about a shortening of the febrile period, causing the rapid disappearance of the cutaneous symptoms. The authors are especially impressed with the effectiveness of this treatment in erysipelas of nurslings. The mode of action of the substance is not well known, but the results seem to be undeniably good. Presse Medicale, Paris.

Pyrethrum Treatment of Scabies—S. E. Sweitzer and J. W. Tedder state that pyrethrum ointment affords an efficient agent for the treatment of scabies; it is non-irritant and has a pleasant odor. The ointment consists of an absorbent fatty base in which is dissolved the extractive matter of pyrethrum flowers. It contains 0.75% of pyrethrins (the active principle of the flowers) so that 100 grams of the ointment represents 83 grams of pyrethrum flowers. Minnesota Medicine.

New Medicines

Flavadine is a 2% solution of 3, 6-diamino-10-methylacridiniunglycolylaminophenylarsenic acid brought into solution by an excess of 3, 6-diamino-10-methylacridinium chloride. It is used in the treatment of gonorrhea in females, particularly cervix gonorrhea. In spite of its strong gonocidal properties it has little effect on the tissue and may therefore be injected in 1-3 cc. quantities. Curta & Co. G. m. b. H., Berlin-Britz.

Selvoral is the calcium salt of glucohexacitric acid containing 8.5% of calcium. It is slightly soluble in water, tasteless and used for oral administration. It is indicated for use in calcium deficiencies, vegetative disturbances, inflammatory conditions, certain dermatological cases and bleeding. Bayer, I. G. Farbenindustrie, A. G., Leverkusen.

Anaquintine. Nasal drops contain benzaldehyde .25%, thymoform .3%, eucalyptol .1%, thymol .6%, menthol .25%, ephedrin .5%, alphabutyl paraaminobenzoate .5% in poppy seed oil. It is recommended for the disinfection of the nasal passages in the treatment of colds, catarrh and sinusitis. It can be used with advantage in cases of influenza, whooping cough and mumps. The preparation is supplied in a vial fitted with a patent drop-counting instillator which assures asepsis and correct dosage. Three to eight drops, 3 to 5 times a day, in each nostril, is the suggested dose.

Magsorbent consists of magnesium trisilicate. It is to be used as an antacid and adsorbent in the treatment of peptic ulcer and acid dyspepsia. One to two teaspoonfuls of the powder, stirred up in a little water, are taken one to two hours after meals. Or one to three tablets are chewed and swallowed with water. Kaylene, Ltd., London.

The Canine Market

(*Continued from page 109*)

Perfume for Dogs" to bring it out in the open. Some one told us that there are two million dogs of good family in the area of New York City. This is no market to growl at. Certainly there must be half a million of these kept in the pink by fond ladies.

Nail polish not only makes show dogs look nicer—it keeps the nails from scratching and chipping. Black for white dogs, white for black dogs, and red, green, gold and natural for others, are favored. Perfumes hold down that doggy odor, which means something to many an apartment house dweller.

Cod liver oil and other special things added to the diet have long been used to secure a glossy healthy coat. Why not hair rinses, hair tonics, bleaches, powders, and others? The show dog has long been a creature of exquisite coiffure, but when will some enterprising manufacturer offer a canine beauty line? What a Christmas gift for Fido.

readers'

TERMINOLOGY

Kindly tell me what you mean when sometimes in your formulas for creams or lotions you say quite simply, "acid." I should like very much to know what kind of acid it could be? Beograd, Jugoslavia.

When such terms are usually used in connection with cosmetics they refer to mild acids such as lactic, boric, phosphoric, acetic, etc. If you refer back to the formulas you will observe that we always identify the particular acid, although in discussing manufacturing procedure, we may refer to the particular acid, simply as "acid." It had not occurred that such references might be construed as having reference to acids other than those contained in the particular formulas under discussion, and we shall take pains to be more explicit in the future.

ERRATUM

While we are about correcting some of the errors we too frequently make, we wish to call attention to a printer's error (poor devil, he gets blamed for everything), in last months article on lipstick. The dye was described as tribromfluorescein, which, we do not believe is commercially available, whereas we mean tetrabromofluorescein. Also in Readers' Questions a sun screen was referred to as methyl salicylate when it should have been menthyl salicylate. There's a hell of a difference. That one must have been a stenographic error, or a proofreader's error. We couldn't possibly make any mistakes ourselves. It isn't done.

SOLIDIFIED HYDROGEN PEROXIDE

Inasmuch as a number of our subscribers have asked this department where they might buy solidified hydrogen peroxide, we wish to advise one and all that we understand that it is sold by Merck & Co., Rahway, N. J.

SLUGGING PROCESS

We note in some of the advertisements and in certain articles on the subject, references to the "slugging process" and the pre-compression process of making tablets. Is this something new and if so how is it done? Pittsburgh.

The method is not exactly new. It was first applied to the manufacture of aspirin granulations and later extended by several experimenters to other tablet granulations. Although the process has been previously described in this magazine, it is worth additional comment because, as a general procedure, the method is sufficiently new so that new applications are of timely interest. The method eliminates wetting, granulating and drying the tablet mass by the usual procedure. A special type of heavy duty rotary press is utilized for making the slugs, these being made of course with rather large punches and dies. The mixed, and sometimes pulverized powder, containing all the medicaments is put directly into the hopper of the slugging press. A variety of devices are employed to make this powder feed into the large dies, which it does more or less irregularly. The slugs which come out of the press are of various weights and sizes. These slugs are then ground coarsely and the pressing operation is repeated. Sometimes it may be necessary to grind and recompress the slugs several times. The final result is a uniformly hard granulation that will readily flow into the die of the regular tablet presses, in many cases without the addition of lubricants of any kind. In spite of the necessity for one or more grinding and compressing operations, the process is very much simpler and faster than the traditional method. Slugging machines other than rotary presses have been used for making the slugs, but so far as we know these machines have not proved to be as satisfactory as the rotary presses with which you are familiar. Considering the elements of time, labor, speed and uniformity it appears to us that the method has a very promising future.

TRANSPARENT EMULSIONS

We have been attempting to make a transparent emulsion as a basis for a new type hair tonic, but our experiments have thus far been fruitless because all our samples have the characteristic milky appearance of emulsions. When we succeed in avoiding the milky appearance, the product separates. If you have any suggestions we shall be grateful for them. Dallas.

The usual pharmaceutical and cosmetic emulsions are white or "milky" in appearance. Transparent products that are mixtures of oil and water are sometimes thought of as emulsions, but really are either solutions or suspensions. Sulfonated oil is miscible with water and when so mixed, is a solution. Light viscosity oils in small quantities can be suspended in the proper type of gum solution but this does not make the mixture an emulsion. But transparent emulsions have been made, and in order to make one, it is necessary that the internal and external phases be made to have the same refractive index. High concentration sugar syrups added to certain emulsions will tend to make them transparent. In some cases mutually miscible "binding agents" such as ethylene glycol, and the trade-marked product known as butyl cellusolve, will turn the trick. In any case a transparent emulsion requires considerable skill in its preparation.

ANTISEPTIC CREAM

We are trying to produce an antiseptic cleansing cream intended for the cleansing and relief of skin eruptions. Can you tell us of harmless and inodorous antiseptics for this purpose? Our assays with oxyquinoline sulfate have failed since it destroys the perfume and imparts a greenish tone to the cream. Are there any accepted methods of testing antiseptics dissolved in oils? Barcelona, Spain.

The fact that you haven't mentioned whether the cream is a straight oil mixture or an emulsion makes it rather difficult to make recommendations. Since the cream is to be used for erupted skin and apparently not for general use, the mercurials suggest themselves. Phenyl mercuric nitrate is said to be effective. The Heyden Chemical Corporation, among others, has developed some new antiseptics said to be effective both in straight oil media and in emulsions. One of the difficulties in assaying the effectiveness of an antiseptic material contained in an oily media is that the usual tests applied to water soluble antiseptics are not completely indicative. The usual procedure of testing the material on agar plates is likely to be misleading, as such tests will sometimes show a definite inhibition ring, which is by no means a complete indication of the killing power of the antiseptic. Numerous antiseptics will inhibit the growth of bacteria, but there are not so many oil soluble antiseptics that will kill bacteria in infected areas. And assuming that you did find such an antiseptic, we don't know of a reliable test by which you could check it in an oil media. We believe that numerous tests have been worked out privately, but we don't know of one which has general acceptance.

questions

CREAM MASCARA

We are interested in making a cream mascara and will appreciate any aid you can give in helping us work it out. Newark.

A cream of this kind can be made in several ways. One method is to disperse lampblack or carbon black in an oil or an oil and fat mixture and add just enough beeswax to stiffen it up. Another is to mill lampblack with an absorption base, adding enough water to bring the mass to proper consistency. A third is to mix the lampblack with oil and emulsify it with glyceryl monostearate. Either of the first two methods would probably be most satisfactory, because glyceryl monostearate will hold only a certain amount of oil and lampblack is not particularly compatible with water.

SOLVENTS

We are interested in learning about the various solvents for bromo acid. We are planning to use dibromofluorescein in an indelible lipstick and we have learned that its effectiveness depends to a great extent upon the solvent employed. Chicago.

The solvents for bromo acid are castor oil, the most commonly used, butyl stearate, benzoinated lard, hydrogenated coconut oil, benzyl stearate, butyl acetyl ricinoleate. There are many solvents for bromo acid but only the non-volatile ones can be used.

STAIN REMOVER

We wish to manufacture a product for removing stains from the fingers such as nicotine, fruit stains, lipstick stains, ink, etc.

It is a pretty large order to expect one type of stain remover to remove all kinds of stains from the skin. Stain removal implies that the remover must be a solvent for the stains or for the skin. Inasmuch as many people have an obstinate desire not to have their skins dissolved, we suggest that you use as a basis for your product, petroleum ether, which is a solvent for a good many things. Please remember that this material is highly volatile and inflammable.

PEARL COATINGS

One of our inquirers would like to know how to coat tablets with a pearly coating without using sugar. We must confess our ignorance of this and shout for help from those who know.

FLEA KILLER

Will you please tell us if there is any substance known to you that can be incorporated in a dog shampoo that will kill fleas, (allowing the dog in each case to survive)? Boston.

Cosmetics are certainly going to the dogs as one of our advertisers puts it. We can't answer your question directly without first giving you an Irish answer. Are you sure that it isn't more important to kill the dog? You might try skinning the mutts. But as the pups wouldn't like this, you might try shaving them or better still incorporate a depilitating agent, such as thallium acetate, which would first remove the hair, then the fleas and then the mutt. Or better still you might try some of the chemicals they spray on shrubbery, telegraph poles and fire hydrants to keep mutts on all four feet at all times. This would make them run so fast that maybe the fleas wouldn't catch up with them. Now that we have limned the sociological and scientific aspects of the question, we shall say that mixtures of pyrethrum and derris root extracts have been tried in soaps for dogs and that rotenone and pyrethrum extract have been incorporated in dry shampoos having a sulfated fatty alcohol base. As to their effectiveness, ask the mutts.

WATER

We have received so much help from your great magazine that we are led to ask have you please the formula for Maybelle water. Mexico City.

We've never seen Maybelle water. If you mean *Javelle* water, it is made by mixing 8 grams of chlorinated lime with 40 ccs. of water. To this is added 5.8 grams of potassium carbonate dissolved in 30 ccs. of boiling water. The mixture is shaken well, allowed to cool before filtration and enough water to make 100 ccs. is added. The product must be well sealed and protected from light.

TUBE CORROSION

We are enclosing sample tubes of shoe whitener which are badly corroded, the tubes being eaten through in some instances, and the product as you will see, is as hard as a house brick. We haven't been able to determine the cause of this and will appreciate any help you can give us. Milwaukee.

We shall discuss the hardening first. While you haven't disclosed the formula, we are of the opinion that this product contains zinc oxide and glycerin. As it is a shoe whitener, the zinc oxide probably is a technical grade and contains zinc sulphide, which is also known as lithipone or litharge. Now litharge and glycerin make a hard, impervious cement, and if our guess as to ingredients is right, there is your answer. As to the corrosion, this might be caused by the zinc sulphide. But if this isn't the case we suggest the use of tubes lacquered on the inside, which are generally used to prevent reaction between tubes and the material contained in them.

SPEAKING OF TUBE CORROSION

In response to our call for help last month Pennsylvania collapsible tube company suggested the use of lacquered tubes mentioned above, and C. J. Westin, of F. J. Stokes Machine Co., originator of the Westite Leakproof Closure, writes as follows:

"If the product as well as the material of the tube has been carefully checked, it would be well if your subscriber carefully checks the material used in his mixing and filling equipment. I recall one or two cases where the discoloration was traceable directly to the type of metal used in filling machine parts. I also recollect a similar difficulty caused by improper cleaning of filling machine parts where the parts happened to be constructed in such a way that proper cleaning was practically impossible when changing from one product to another. With reference to the corrosion problem and the tooth paste tubes, I would suggest coating the tubes inside with a protective varnish or lacquer. As you know the idea of coating the inside of collapsible tubes is gaining popularity and there are very good reasons for this. It may require a bit of research to discover the proper protective material. But we recently developed a special type of machine for applying such coating to the inside of tubes and many of them are in use."

Our thanks to both companies. We trust the information above will enable our inquirers to overcome their difficulties. But if their troubles are due to obscure chemical reactions having nothing to do with metals, then there is nothing to be done but undertake careful research to isolate and eliminate such conditions.

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